



469484

**SITE ASSESSMENT REPORT  
FOR  
LOEWENTHAL METALS SITE  
CHICAGO, COOK COUNTY, ILLINOIS**

Prepared for:

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Emergency Response Branch

Region V

77 West Jackson Boulevard

Chicago, IL 60604-3507

Prepared by:

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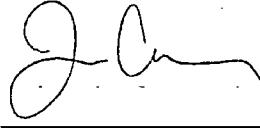
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## LIST OF ABBREVIATIONS AND ACRONYMS

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ATSDR	Agency for Toxic Substances and Disease Registry
bgs	Below ground surface
CFR	<i>Code of Federal Regulations</i>
FIELDS	Field Environmental Decision Support
FSP	Field Sampling Plan
IEPA	Illinois Environmental Protection Agency
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OSC	On-Scene Coordinator
PCB	Polychlorinated biphenyl
PID	Photoionization detector
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Level
START	Superfund Technical Assessment and Response Team
SU	Standard Unit
SVOC	Semivolatile organic compound
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
U.S. EPA	U.S. Environmental Protection Agency
VOC	Volatile organic compound
VSP	Visual Sampling Plan
WESTON	Weston Solutions, Inc.
XRF	X-ray fluorescence

## 1. INTRODUCTION

The U.S. Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) to assist U.S. EPA On-Scene Coordinator (OSC) Steve Faryan in performing a site assessment at the Loewenthal Metals site in Chicago, Cook County, Illinois (the Site) (**Figure 1**). Specifically, under Technical Direction Document No. S05-0001-1201-003, the U.S. EPA requested that WESTON START document and photograph current Site conditions, advance soil borings, screen surface soil using an x-ray fluorescence (XRF) analyzer, collect soil and concrete samples, and evaluate the potential for imminent and substantial threats to the public health or welfare of the United States or the environment posed by Site-related conditions. On November 27, 2012, WESTON START member Jonathan Colomb and the U.S. EPA Field Environmental Decision Support (FIELDS) Team conducted the site assessment under the direction of U.S. EPA OSC Faryan.

This site assessment report is organized into the following sections:

- **Section 1, Introduction** – Briefly describes the site assessment and its scope
- **Section 2, Site Background** – Describes the Site and summarizes its known history
- **Section 3, Site Assessment Activities** – Discusses observations made and sampling methods and procedures used during the site assessment
- **Section 4, Analytical Results** – Discusses laboratory analytical results for samples collected during the site assessment
- **Section 5, Threats to Human Health and the Environment** – Identifies Site-related conditions that may warrant a removal action based on criteria established in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) under Title 40 of the *Code of Federal Regulations* (CFR), Part 300
- **Section 6, Conclusions** – Summarizes the site assessment findings and conclusions drawn based on the findings

## 2. SITE BACKGROUND

This section discusses the Site description and history.

## 2.1 SITE DESCRIPTION

The Site is located at 947 West Cullerton Street in Chicago, Cook County, Illinois (**Figure 1**). The Site is near the center of the Pilsen neighborhood, a primarily residential area. The Site's coordinates are 41°51'19" North latitude and 87°39'0.6" West longitude. The Site is bordered to the north by West Cullerton Street, with residential properties beyond; to the east by a recreational trail and South Sangamon Street, with railroad tracks and commercial properties beyond; and to the south and west by residential properties (**Figure 2**). The Site currently consists of an empty lot with a grass surface cover occupying approximately 0.42 acre. The southern portion of the Site is elevated approximately 4 to 5 feet above grade and contains evidence of a concrete foundation. This elevated area includes the remnants of an abandoned railroad spur that served a former smelting facility at the Site. The Site is unsecured.

Sensitive populations located within 1 mile of the Site include numerous residential properties, two elementary schools, one high school, and two churches.

## 2.2 SITE HISTORY

Based on historical aerial photographs, the Site contained a railroad spur, and a large smelting facility operated by the Loewenthal Metals Corporation during the 1940s. In the *1940 Standard Metal Directory*, Loewenthal Metals Corporation is listed as an aluminum, antimonial lead, and zinc smelter as well as a Babbitt metal and solders manufacturer and an ingot metal and scrap metal dealer. The company also is listed in the *1948-49 Standard Metal Directory* as an aluminum and battery lead smelter, scrap iron and metal dealer, and importer and exporter of scrap metal. The smelter ceased operations in the early 1950s. Additional information regarding the demolition of the smelting facility is not available.

The Site is one of 464 potential unknown battery lead, babbitt metals, and solder smelters identified in an April 2001 report by William P. Eckel. The smelters were identified based on historical literature searches for potential smelters and cross-checking of the findings against U.S. EPA and state environmental databases. On July 15, 2006, the Illinois Environmental Protection Agency (IEPA) conducted a Site reconnaissance to determine current Site conditions.

During the Site reconnaissance, the IEPA observed that Site access was completely unrestricted. The IEPA also observed evidence of transients living on the Site property. IEPA screened surface soil at 12 locations using an XRF analyzer. Readings revealed arsenic, copper, manganese, and zinc at levels exceeding three times background levels. Lead readings exceeded the U.S. EPA Regional Screening Level (RSL) for residential soil of 400 parts per million.

Based on the Site reconnaissance results, the IEPA referred the Site to the U.S. EPA for consideration of a time-critical removal action.

### **3. SITE ASSESSMENT ACTIVITIES**

On November 27, 2012, U.S. EPA OSC Faryan, the U.S. EPA FIELDS Team, and WESTON START personnel arrived at the Site to conduct the site assessment. The objectives of the site assessment included the following:

- Identify the constituents and characteristic properties of materials present in soil at the Site
- Determine if a removal action is warranted at the Site based on NCP criteria, and if so, determine if the response should be classified as an emergency, time-critical, or non-time-critical response
- Rapidly assess and evaluate the urgency, magnitude, extent, and effects of a release or threatened release of hazardous substances, pollutants, or contaminants identified at the Site and their potential effects on the public health or welfare of the United States or the environment
- Supply the Agency for Toxic Substances and Disease Registry (ATSDR) or others with information about the nature and magnitude of any health threats associated with the Site
- Support subsequent public health advisories
- Identify a potential response to eliminate, reduce, or control Site-related risks to the public health or welfare of the United States or the environment and to support an Action Memorandum documenting the identified removal approach

**Appendix A** provides a photographic log of Site conditions and activities conducted during the site assessment. The Site reconnaissance and field screening and sampling activities are discussed below.

### 3.1 SITE RECONNAISSANCE

The U.S. EPA and WESTON START conducted a Site reconnaissance after an initial health and safety briefing. The Site reconnaissance was performed in Level D personal protective equipment in accordance with the approved site-specific Health and Safety Plan. Air monitoring was conducted in the breathing zone throughout the Site reconnaissance using a MultiRAE five-gas meter and a MicroR gamma radiation detector. The MultiRAE five-gas meter includes a photoionization detector (PID) that measures organic vapors, a carbon monoxide sensor, a hydrogen sulfide sensor, a lower explosive limit meter, and an oxygen meter. No readings exceeded background levels during the Site reconnaissance.

Observations made during the Site reconnaissance are summarized below.

The Site is a grassed, empty lot that was not secured during the site assessment. The north end of the Site is bordered by a developed sidewalk. The east end of the Site is bordered by a recreational trail. The southern portion of the Site contains several large trees. The southern portion of the Site is elevated approximately 4 to 5 feet above grade and contains evidence of a concrete foundation. This elevated area includes the remnants of an abandoned railroad spur that served a former smelting facility at the Site. Based on visual observations, portions of the concrete foundation appeared to contain bits of metal slag. Two empty, 55-gallon polyethylene drums were also observed on site.

No storm or sanitary sewers or drainage ditches were observed on or around the Site, although sanitary sewers are located approximately 1,000 feet west of the Site. Animal tracks were observed in soil at the Site. A community garden is located south of the Site.

Evidence of transient housing was noted on the adjacent railroad property. Numerous young children were observed walking on the developed sidewalk that borders the north side of the Site to the nearby elementary school. Many residents and pets were observed using the recreational trail that borders the east side of the Site.

## 3.2 FIELD SCREENING AND SAMPLING ACTIVITIES

The U.S. EPA FIELDS Team and WESTON START conducted XRF field screening and soil sampling according to the visual sampling plan (VSP) grid detailed in the U.S. EPA-approved Field Sampling Plan (FSP) for the Site. The VSP grid was designed with a total of 20 sampling locations on a 95 percent confidence of detecting a hotspot with a radius of approximately 20 feet. The concrete foundation at the southern end of the Site and the recreational trail made several screening and sampling locations inaccessible. In total, 22 samples (19 investigative and 3 duplicate samples) were collected for laboratory analysis. **Figure 3** shows the sampling locations.

At each screening and sampling location, U.S. EPA used a direct-push, Geoprobe® track-mounted rig to advance 19 soil borings (LM-SB01 through LM-SB03, LM-SB05, LM-SB07, LM-SB08, LM-SB10, LM-SB11, LM-SB13 through LM-SB17, LM-SB19 through LM-SB23, and LM-SB16D) to 3 feet below ground surface (bgs) or refusal. Soil was collected using a dual-core sampler. A qualified WESTON geologist inspected each soil core and recorded observations in a soil boring log using the Unified Soil Classification System. **Appendix B** provides a copy of the field boring logs. The boring log provides a detailed record of the lithology and potential contaminant characteristics at each boring, including descriptions of any fill materials, odors, discoloration, and staining suggesting the presence of contamination. In accordance with the FSP, each 2-foot depth interval was field screened for volatile organic compounds (VOC) by placing a section of the soil into a plastic, Ziploc®-style bag, allowing contents to volatilize, and then screening the headspace for VOCs using a MultiRAE PID. The field screening VOC results also were recorded in the field boring logs.

### 3.2.1 XRF Field Screening

At each of the 19 boring locations, the U.S. EPA FIELDS Team screened surface soil for metals (arsenic and lead) using XRF analyzers. Two XRF analyzers were used: an Innov-X Alpha 4000 and an Innov-X Delta. The results from both units were averaged to provide results that are as accurate as possible. A total of 69 soil samples were collected from the 19 boring locations and screened with the XRF analyzers. **Table 1** summarizes the XRF screening results. XRF screening  
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results for arsenic were compared to the U.S. EPA RSL for residential soil of 0.39 milligrams per kilogram (mg/kg) and to the U.S. EPA RSL for industrial soil of 1.6 mg/kg. XRF screening results for lead were compared to the U.S. EPA RSL for residential soil of 400 mg/kg, to the U.S. EPA RSL for industrial soil of 800 mg/kg, and to the 40 CFR, Part 745 unoccupied residential soil level of 1,200 mg/kg.

Arsenic was detected in 53 of the 69 intervals, and readings exceeded the U.S. EPA RSL for residential soil and industrial soil in all 53 intervals. Arsenic concentrations ranged from 5 to 1,087.5 mg/kg, and arsenic was detected in all the soil borings at the Site, indicating an even distribution throughout the Site. The highest arsenic readings exceeding the RSLs were detected from 12 to 24 and 24 to 36 inches bgs.

Lead was detected in all 69 intervals, and readings exceeded the U.S. EPA RSL for residential soil in 59 intervals, exceeded the RSL for industrial soil in 44 intervals, and exceeded the CFR, Part 745 level in 36 intervals. Lead concentrations ranged from 11.3 to 26,794 mg/kg, and lead was detected in all the soil borings at the Site, indicating an even distribution throughout the Site. The highest lead readings exceeding the screening levels were detected from 12 to 24 and 24 to 36 inches bgs.

### **3.2.2 Soil and Concrete Sampling**

Soil samples were collected from approximately 30 percent of the screened intervals based on a bias to provide a range of metals concentrations. A total of 22 soil samples (19 investigative and 3 duplicate samples) were submitted under chain of custody to a WESTON-procured laboratory, STAT Analysis Corporation in Chicago, Illinois.

One concrete sample, LM-Concrete-112712, was collected from a portion of the concrete foundation that appeared to be composed of smelting slag.

## **4. ANALYTICAL RESULTS**

Using a biased sample collection methodology, surface and subsurface soil samples were collected from a range of depth intervals from 11 of the 19 soil boring locations. The samples  
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were collected to determine if the Site poses imminent and substantial threats to the public health or welfare of the United States or the environment from the presence of potentially hazardous materials.

Soil samples were analyzed for pH and Resource Conservation and Recovery Act (RCRA) metals plus copper, manganese, and zinc. Additionally, soil samples LM-SB05-(6-16)-112712, LM-SB14-(24-32)-112712, and LM-SB16-(24-36)-112712 were analyzed for extended parameters, including TCLP metals, TCL pesticides, PCBs, TCL VOCs, and TCL SVOCs. The duplicate sample, LM-SB05-(6-16)-112712D, was analyzed for TCL VOCs only. The concrete sample, LM-Concrete-112712, was analyzed for pH and RCRA metals plus copper, manganese, and zinc.

The soil sample results for pH and TCLP metals results for the soil samples were compared to the hazardous waste criteria outlined in 40 Code of Federal Regulations (CFR), Part 261 Subpart C for corrosivity and toxicity. The soil sample results for RCRA metals, TCL pesticides, TCL VOCs, TCL SVOCs, and PCBs were compared to the U.S. EPA RSLs – both the residential and industrial criteria. In addition, total lead was also compared to 40 CFR, Part 745 unoccupied residential soil level. The concrete sampling results were not compared to any screening criteria.

**Figure 3** shows the sampling locations. **Tables 2 and 3** summarize the soil sample results and **Table 4** summarizes the concrete sample results. **Figure 4** shows the sample analytical results exceeding the screening criteria. **Appendix C** provides the laboratory analytical report and the data validation report for the samples. The results for each sampled medium are summarized below.

#### **4.1 SOIL SAMPLE ANALYTICAL RESULTS**

Soil sample analytical results are summarized below.

##### **pH (Table 3)**

The pH results ranged from 6.1 to 8.6 standard units (SU). According to 40 CFR Part 261.22, a pH value of greater than or equal to 12.5 SUs or less than or equal to 2 SUs exhibits the characteristic of corrosivity. The soil samples represent materials that do not meet the definition

of hazardous waste for the characteristic of corrosivity.

### RCRA Metals (Table 3 and Figure 4)

RCRA metals (plus copper, manganese, and zinc) detected at concentrations exceeding the screening criteria are summarized below.

- Arsenic exceeded the U.S. EPA RSL for residential soil of 0.39 mg/kg and the RSL for industrial soil of 1.6 mg/kg in the following samples: LM-SB01-(0-10)-112712 (4.9 mg/kg), LM-SB03-(12-24)-112712 (16 mg/kg), LM-SB03-(24-36)-112712 (11 mg/kg), LM-SB05-(6-16)-112712 (6.2 mg/kg), LM-SB07-(6-12)-112712 (5.2 mg/kg), LM-SB07-(12-24)-112712 (5.8 mg/kg), LM-SB10-(24-36)-112712 (40 mg/kg), LM-SB10-(24-36)-112712D (10 mg/kg), LM-SB14-(6-12)-112712 (4.2 mg/kg), LM-SB14-(12-24)-112712 (2.8 mg/kg), LM-SB14-(24-32)-112712 (10 mg/kg), LM-SB15-(12-24)-112712 (5.4 mg/kg), LM-SB16-(0-6)-112712 (4.6 mg/kg), LM-SB16-(12-24)-112712D (4.6 mg/kg), LM-SB16-(24-36)-112712 (15 mg/kg), LM-SB17-(12-24)-112712 (5.1 mg/kg), LM-SB17-(24-36)-112712 (25 mg/kg), LM-SB19-(12-24)-112712 (9 mg/kg), LM-SB23-(6-12)-112712 (12 mg/kg), LM-SB23-(12-24)-112712 (15 mg/kg), and LM-SB23-(12-24)-112712D (20 mg/kg).
- Copper exceeded the U.S. EPA RSL for residential soil of 3,100 mg/kg in the following samples: LM-SB03-(12-24)-112712 (7,000 mg/kg), LM-SB05-(6-16)-112712 (12,000 mg/kg), LM-SB14-(24-32)-112712 (4,500 mg/kg), LM-SB15-(12-24)-112712 (6,000 mg/kg), LM-SB16D-(12-24)-112712 (17,000 mg/kg), and LM-SB23-(6-12)-112712 (3,200 mg/kg). No additional exceedances were observed.
- Lead exceeded only the U.S. EPA RSL for residential soil of 400 mg/kg in sample LM-SB16-(0-6)-112712 (610 mg/kg).
- Lead exceeded the U.S. EPA RSL for industrial soil of 800 mg/kg in the following samples: LM-SB05-(6-16)-112712 (1,100 mg/kg), LM-SB07-(12-24)-112712 (920 mg/kg), and LM-SB14-(6-12)-112712 (980 mg/kg).
- Lead exceeded the 40 CFR, Part 745 of 1,200 mg/kg in the following samples: LM-SB01-(0-10)-112712 (1,200 mg/kg), LM-SB03-(12-24)-112712 (23,000 mg/kg), LM-SB03-(24-36)-112712 (3,100 mg/kg), LM-SB07-(6-12)-112712 (2,200 mg/kg), LM-SB10-(24-36)-112712 (13,000 mg/kg), LM-SB10-(24-36)-112712D (3,400 mg/kg), LM-SB14-(12-24)-112712 (3,300 mg/kg), LM-SB14-(24-32)-112712 (9,700 mg/kg), LM-SB15-(12-24)-112712 (13,000 mg/kg), LM-SB16-(24-36)-112712 (7,400 mg/kg), LM-SB16D-(12-24)-112712 (22,000 mg/kg), LM-SB17-(12-24)-112712 (1,600 mg/kg), LM-SB23-(12-24)-112712 (3,600 mg/kg), LM-SB23-(12-24)-112712D (7,900 mg/kg), and LM-SB23-(6-12)-112712 (5,700 mg/kg).
- Mercury exceeded the U.S. EPA RSL for residential soil of 10 mg/kg in sample LM-SB03-(12-24)-112712 (10 mg/kg) and exceeded the U.S. EPA RSL for industrial soil of 43 mg/kg LM-SB23-(12-24)-112712 (53 mg/kg).

- Zinc exceeded the U.S. EPA RSL – Inhalation for Residential Soil of 23,000 mg/kg in the sample LM-SB03-(12-24)-112712 (37,000 mg/kg).

### TCLP Metals (Table 3 and Figure 4)

TCLP lead was the only metal detected at concentrations exceeding the TCLP regulatory limits. TCLP lead exceeded the regulatory limit of 5 milligram per liter (mg/L) in samples LM-SB14-(24-32)-112712 (16 mg/L) and LM-SB16-(24-36)-112712 (76 mg/L). Therefore, according to 40 CFR 261.24, these samples represent a material that meets the definition of hazardous waste for the characteristic of toxicity.

### TCL Pesticides (Table 2)

All pesticides concentrations were below the method detection limits.

### PCBs (Table 2)

All PCB concentrations were below the method detection limits.

### TCL VOCs (Table 2)

The following samples contained TCL VOCs:

- Sample LM-SB05-(6-16)-112712D: acetone
- Sample LM-SB14-(24-32)-112712: 1,1,1-trichloroethane

No results exceeded the screening criteria.

### TCL SVOCs (Table 2 and Figure 4)

TCL SVOCs detected at concentrations exceeding the screening criteria are summarized below.

- Benzo(a)anthracene exceeded the U.S. EPA RSL – Residential Soil of 0.15 mg/kg and the U.S. EPA RSL – Industrial Soil of 2.1 mg/kg in the following samples: LM-SB05-(6-16)-112712 (5.4 mg/kg), LM-SB14-(24-32)-112712 (64 mg/kg), and LM-SB16-(24-36)-112712 (13 mg/kg).
- Benzo(a)pyrene exceeded the U.S. EPA RSL – Residential Soil of 0.0.015 mg/kg and the U.S. EPA RSL – Industrial Soil of 0.21 mg/kg in the following samples: LM-SB05-(6-16)-112712 (20 mg/kg), LM-SB14-(24-32)-112712 (56 mg/kg), and LM-SB16-(24-36)-112712 (12 mg/kg).
- Benzo(b)fluoranthene exceeded the U.S. EPA RSL – Residential Soil of 0.15 mg/kg and

the U.S. EPA RSL – Industrial Soil of 2.1 mg/kg in the following samples: LM-SB05-(6-16)-112712 (6.2 mg/kg), LM-SB14-(24-32)-112712 (49 mg/kg), and LM-SB16-(24-36)-112712 (11 mg/kg).

- Benzo(k)fluoranthene exceeded the U.S. EPA RSL – Residential Soil of 1.5 mg/kg in samples LM-SB05-(6-16)-112712 (4.1 mg/kg), and LM-SB16-(24-36)-112712 (9.1 mg/kg) and exceeded the U.S. EPA RSL – Industrial Soil of 21 mg/kg in sample LM-SB14-(24-32)-112712 (43 mg/kg)
- Chrysene exceeded the U.S. EPA RSL – Residential Soil of 15 mg/kg in sample LM-SB14-(24-32)-112712 (66 mg/kg).
- Dibenzo(a,h)anthracene exceeded the U.S. EPA RSL – Residential Soil of 0.015 mg/kg and the U.S. EPA RSL – Industrial Soil of 0.21 mg/kg in the following samples: LM-SB05-(6-16)-112712 (2.8 mg/kg), LM-SB14-(24-32)-112712 (17 mg/kg), and LM-SB16-(24-36)-112712 (3.5 mg/kg).
- Indeno(1,2,3-cd)pyrene exceeded the U.S. EPA RSL – Residential Soil of 0.15 mg/kg and the U.S. EPA RSL of 2.1 mg/kg in the following samples: LM-SB05-(6-16)-112712 (3.6 mg/kg), LM-SB14-(24-32)-112712 (30 mg/kg), and LM-SB16-(24-36)-112712 (5.8 mg/kg).
- Napthalene exceeded the U.S. EPA RSL – Residential soil of 3.6 mg/kg in sample LM-SB14-(24-32)-112712 (4.2 mg/kg).

## 4.2 CONCRETE SAMPLE ANALYTICAL RESULTS

Concrete sample analytical results are summarized below.

### pH (Table 4)

The pH result was 8.1 standard units.

### RCRA Metals (Table 4)

The following RCRA metals (plus copper, manganese, and zinc) were detected in concrete sample LM-Concrete-112712:

- Arsenic at 17 mg/kg
- Barium at 130 mg/kg
- Cadmium at 110 mg/kg
- Chromium at 51 mg/kg
- Copper at 320,000 mg/kg

- Lead at 24,000 mg/kg
- Manganese at 140 mg/kg
- Mercury at 0.5 mg/kg
- Selenium at 8.1 mg/kg
- Silver at 62 mg/kg
- Zinc at 58,000 mg/kg

## 5. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Factors to be considered in determining the appropriateness of a potential removal action at a Site are delineated in the NCP at 40 CFR 300.415(b)(2). A summary of the factors applicable to this Site is presented below.

- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances, pollutants, or contaminants**

The Site is located in a residential area. Sensitive populations near the Site include numerous residential properties. In addition, two elementary schools, one high school, and two churches are located within 1 mile of the Site. Animal tracks were observed in soil at the Site. A community garden is located south of the Site.

During the site assessment, Site access was completely unrestricted. Evidence of transient housing was noted on the adjacent railroad property. Numerous young children were observed walking on the developed sidewalk that borders the north side of the Site to the nearby elementary school. Many residents and pets were observed using the recreational trail that borders the east side of the Site.

Based on the site assessment XRF field screening results, arsenic and lead readings exceeded the U.S. EPA RSLs for residential and industrial soil and the 40 CFR, Part 745 for unoccupied residential soil. Based on site assessment soil sample analytical results, lead and mercury concentrations exceeded the U.S. EPA RSLs residential and industrial soil. In addition, the following chemicals were detected at concentrations exceeding the U.S. EPA RSLs for residential and industrial soil - arsenic, copper, lead, mercury, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. In addition, 1,2-benzphenanthracene and naphthalene exceeded the U.S. EPA RSL residential criteria in at least one sample location. TCLP lead also was detected at concentrations exceeding the definition of hazardous waste for the characteristic of toxicity. Nearby human populations could be exposed to these hazardous substances.

Based on site assessment concrete sample analytical results, the concrete sample contained arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, selenium, silver, and zinc.

Exposure to lead can interfere with a variety of body processes and is toxic to many organs and tissues, including the heart, bones, intestines, kidneys, and reproductive and nervous systems. It is known to interfere with the development of the nervous system and therefore is particularly toxic to children, causing potentially permanent learning and behavior disorders.

- **Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released**

Chicago receives an average yearly precipitation of 36.27 inches. Average temperatures range from 9 to 88 °F. The Site ground surface is relatively flat except for the area elevated approximately 4 to 5 feet above grade in the southern portion of the Site. During the site assessment, no storm or sanitary sewers or drainage ditches were observed on or around the Site, although sanitary sewers are located approximately 1,000 feet west of the Site. Because of the lack of a storm water drainage system at the Site, weather-related release or migration of hazardous materials is possible.

Site assessment soil sample analytical results indicate surface and subsurface soil contamination at the Site.

- **The availability of other appropriate federal or state response mechanisms to respond to the release**

The IEPA referred the Site to the U.S. EPA to determine if the Site warrants a time-critical removal action.

## 6. CONCLUSIONS

WESTON START and the U.S. EPA FIELDS Team collected samples from 69 soil intervals from 19 soil borings on Site. Samples from each interval were screened for lead and arsenic using XRF analyzers. Based on the site assessment XRF field screening results, arsenic and lead readings exceeded the U.S. EPA RSLs for residential and industrial soil and lead readings exceeded the 40 CFR, Part 745 for unoccupied residential soil.

From those intervals, 22 soil samples (19 investigative and 3 duplicate samples) were collected and analyzed for pH and RCRA metals plus copper, manganese, and zinc. Additionally, three soil samples were analyzed for TCLP metals, TCL pesticides, PCBs, TCL VOCs, and TCL SVOCs. One duplicate sample was analyzed for TCL VOCs only. One concrete sample was analyzed for pH and RCRA metals plus copper, manganese, and zinc.

Based on site assessment soil sample analytical results, lead concentrations exceeded the U.S.

EPA RSLs for residential and industrial soil and the 40 CFR, Part 745 for unoccupied residential soil. In addition, the following chemicals were detected at concentrations exceeding the U.S. EPA RSLs for residential and industrial soil: arsenic, copper, lead, mercury, and zinc. TCLP lead also was detected at concentrations exceeding the screening criterion deeming it a hazardous waste.

Based on the site assessment, the following chemicals were detected in the concrete sample: arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, selenium, silver, and zinc.

WESTON START determined that elevated concentrations of contaminants at the Site pose a risk to the public health or welfare of the United States or the environment. Hazards identified at the Site include the following uncontrolled factors:

- Surface and subsurface soil contamination
- Chemicals detected in a sample of concrete
- Close proximity of Site to residential properties and other sensitive receptors (including churches and schools)
- Potential migration pathways from waste on-site to public areas

Contaminants and conditions at the Site meet criteria established in the NCP for a removal action.

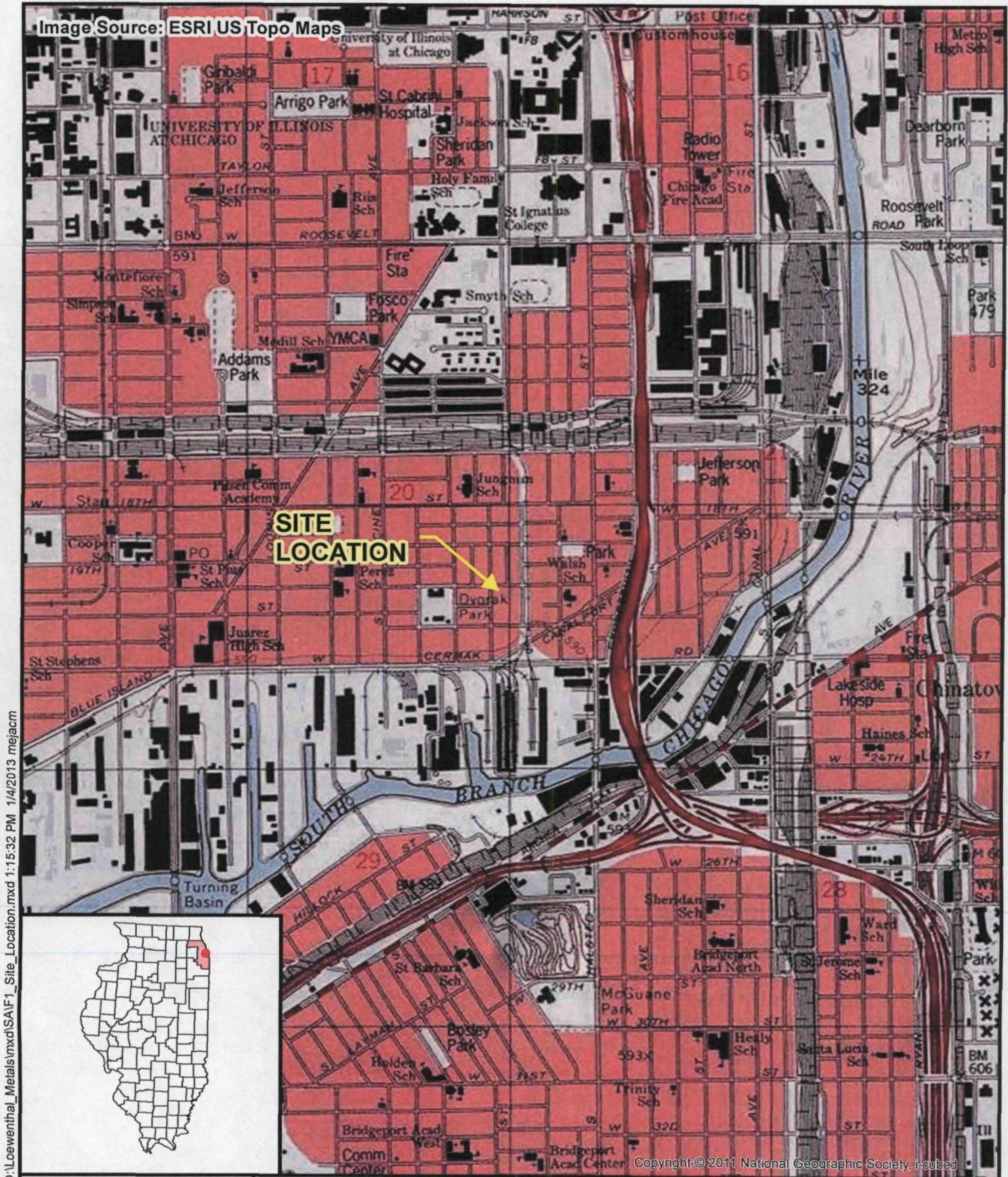
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## **FIGURES**

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Image Source: ESRI US Topo Maps



FILE: D:\Loewenthal\_Metals\mxds\SAF1\_Site\_Location.mxd 1:15:32 PM 1/4/2013 mejacm

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**Legend**



0 2,000  
Feet



Prepared for:

U.S. EPA REGION V

Contract No.: EP-S5-06-04  
TDD: S05-0001-1201-003  
DCN: 1714-2A-BEYF



Prepared By:  
**WESTON  
SOLUTIONS, INC**

750 E Bunker Ct  
Suite 500  
Vernon Hills, IL 60061

**Figure 1**  
Site Location Map  
Loewenthal Metals  
Chicago, Cook County, Illinois

Image Source: ESRI Bing Maps



**Legend**

Approximate Site Boundary



0 250 Feet



Prepared for:  
U.S. EPA REGION V

Contract No.: EP-S5-06-04  
TDD: S05-0001-1201-003  
DCN: 1714-2A-BEYF



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**Figure 2**  
Site Features Map  
Loewenthal Metals  
Chicago, Cook County, Illinois



Image courtesy of the IndianaMap © 2012 Microsoft Corporation © 2010 NAVTEQ © AND



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**Figure 3**  
Sampling Location Map  
Loewenthal Metals  
Chicago, Cook County, Illinois

SB15-(12-24)-112712 11/27/12

Depth	Parameter	Result	Units	[Criteria]
24	Arsenic	5.4	mg/Kg	[1,2]
24	Copper	6000	mg/Kg	[1]
24	Lead	13000	mg/Kg	[1,2,3]

LM-SB23-(6-12)-112712 11/27/12

Depth	Parameter	Result	Units	[Criteria]
6-12	Arsenic	12	mg/Kg	[1,2]
6-12	Copper	3200	mg/Kg	[1]
6-12	Lead	5700	mg/Kg	[1,2,3]
12-24	Arsenic	15	mg/Kg	[1,2]
12-24	Lead	3600	mg/Kg	[1,2,3]

LM-SB23-(12-24)-112712D 11/27/12

Depth	Parameter	Result	Units	[Criteria]
12-24	Arsenic	20	mg/Kg	[1,2]
12-24	Lead	7900	mg/Kg	[1,2,3]
12-24	Mercury	53	mg/Kg	[1,2]

LM-SB17-(12-24)-112712 11/27/12

Depth	Parameter	Result	Units	[Criteria]
12-24	Arsenic	5.1	mg/Kg	[1,2]
12-24	Lead	1600	mg/Kg	[1,2,3]

LM-SB10-(24-36)-112712 11/27/12

Depth	Parameter	Result	Units	[Criteria]
24-36	Arsenic	40	mg/Kg	[1,2]
24-36	Lead	13000	mg/Kg	[1,2,3]

LM-SB10-(24-36)-112712D 11/27/12

Depth	Parameter	Result	Units	[Criteria]
24-36	Arsenic	10	mg/Kg	[1,2]
24-36	Lead	3400	mg/Kg	[1,2,3]

SB12 11/27/12

Parameter	Result	Units	[Criteria]
Arsenic	4.6	mg/Kg	[1,2]
Arsenic	610	mg/Kg	[1]
Arsenic	46	mg/Kg	[1,2]
Arsenic	17000	mg/Kg	[1]
Arsenic	22000	mg/Kg	[1,2,3]
Arsenic	15	mg/Kg	[1,2]
Arsenic	13	mg/Kg	[1,2]
Arsenic	12	mg/Kg	[1,2]
Arsenic	11	mg/Kg	[1,2]
Arsenic	9.1	mg/Kg	[1]
Arsenic	3.5	mg/Kg	[1,2]
Arsenic	3.8	mg/Kg	[1,2]
Arsenic	7400	mg/Kg	[1,2,3]
Arsenic	76	mg/L	[4]

LM-SB05-(6-16)-112712 11/27/12

Depth	Parameter	Result	Units	[Criteria]
6-16	Arsenic	6.2	mg/Kg	[1,2]
6-16	Benz(a)anthracene	5.4	mg/Kg	[1,2]
6-16	Benzo(a)pyrene	20	mg/Kg	[1,2]
6-16	Benzo(b)fluoranthene	6.2	mg/Kg	[1,2]
6-16	Benzo(k)fluoranthene	4.1	mg/Kg	[1]
6-16	Copper	12000	mg/Kg	[1]
6-16	Dibenz(a,h)anthracene	2.8	mg/Kg	[1,2]
6-16	Indeno(1,2,3-cd)pyrene	3.6	mg/Kg	[1,2]
6-16	Lead	1100	mg/Kg	[1,2]

Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User



Prepared By:  
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**Figure 4**  
Analytical Exceedance Map  
Loewenthal Metals  
Chicago, Cook County, Illinois

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**TABLES**

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**Table 1**  
**XRF Screening Results for Arsenic and Lead**  
**Loewenthal Metals**  
**Chicago, Cook County, Illinois**

Screening Parameter	Location ID			40 CFR Part 745 <sup>3</sup>	LM-SB01	LM-SB02	LM-SB03	LM-SB05	LM-SB07	LM-SB08	LM-SB10	LM-SB11	LM-SB13	LM-SB14	
	Sampling Date				11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	
	Depth Interval (inches bgs)	U.S. EPA RSL-Res <sup>1</sup>	U.S. EPA RSL-Ind <sup>2</sup>		Result (ppm)										
Arsenic, XRF	0 - 3	0.39	1.6	---	NA	NA	NA	NA	NA	38.5	NA	NA	NA	NA	
Arsenic, XRF	0 - 6	0.39	1.6	---	NA	16.5 U	15.5 U	5	22 U	NA	34.5	44.5	17 U	25	
Arsenic, XRF	0 - 10	0.39	1.6	---	45	NA									
Arsenic, XRF	6 - 12	0.39	1.6	---	NA	28.5	45.5	NA	139	NA	88.5	31	23	67.5	
Arsenic, XRF	6 - 16	0.39	1.6	---	NA	NA	NA	101.5	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	12 - 18	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	12 - 22	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	12 - 24	0.39	1.6	---	NA	58	398.5	NA	102	NA	49.5	12 U	23.5	122.5	
Arsenic, XRF	24 - 32	0.39	1.6	---	NA	NA	NA	NA	276.5	NA	NA	NA	28.5	109.5	
Arsenic, XRF	24 - 34	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	24 - 36	0.39	1.6	---	NA	1,087.5	164	NA	NA	NA	51	11 U	NA	NA	
Lead, XRF	0 - 3	400	800	1,200	NA	NA	NA	NA	NA	1,071.50	NA	NA	NA	NA	
Lead, XRF	0 - 6	400	800	1,200	NA	397.5	386	89.5	712.5	NA	924.5	877	393.5	632	
Lead, XRF	0 - 10	400	800	1,200	1,375	NA									
Lead, XRF	6 - 12	400	800	1,200	NA	519.5	685.5	NA	1,499	NA	2,528.5	1,078	464.5	905.5	
Lead, XRF	6 - 16	400	800	1,200	NA	NA	NA	2,011.5	NA	NA	NA	NA	NA	NA	
Lead, XRF	12 - 18	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	12 - 22	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	12 - 24	400	800	1,200	NA	744.5	26,794	NA	2,130	NA	2,190.5	218.5	564.5	2,204.5	
Lead, XRF	24 - 32	400	800	1,200	NA	NA	NA	NA	2,660	NA	NA	NA	693	2,782.5	
Lead, XRF	24 - 34	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	24 - 36	400	800	1,200	NA	25,479	2,378.5	NA	NA	NA	2,410	170.5	NA	NA	

**Table 1**  
**XRF Screening Results for Arsenic and Lead**  
**Loewenthal Metals**  
**Chicago, Cook County, Illinois**

Screening Parameter	Location ID			40 CFR Part 745 <sup>3</sup>	Result (ppm)									
	Sampling Date	11/27/2012	LM-SB15	LM-SB16	LM-SB16D	LM-SB17	LM-SB19	LM-SB20	LM-SB21	LM-SB22	LM-SB23	11/27/2012	11/27/2012	11/27/2012
Arsenic, XRF	0 - 3	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, XRF	0 - 6	0.39	1.6	---	43	17.5 U	24.5	45.5 U	67.5	25.5	33	39	230	
Arsenic, XRF	0 - 10	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, XRF	6 - 12	0.39	1.6	---	46	42	60	80.5	91.5	55	122	39.5	328.5	
Arsenic, XRF	6 - 16	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	12 - 18	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	85.5	NA	
Arsenic, XRF	12 - 22	0.39	1.6	---	NA	NA	NA	NA	NA	NA	43.5 U	NA	NA	
Arsenic, XRF	12 - 24	0.39	1.6	---	331.5	127.5	199	19.5	40.5	73.5	NA	NA	240.5	
Arsenic, XRF	24 - 32	0.39	1.6	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	24 - 34	0.39	1.6	---	220	NA	NA	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	24 - 36	0.39	1.6	---	NA	48 U	50 U	15	NA	NA	NA	NA	19.5	
Arsenic, XRF	36 - 48	0.39	1.6	---	NA	NA	40.5 U	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	48 - 60	0.39	1.6	---	NA	NA	67.5 U	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	60 - 72	0.39	1.6	---	NA	NA	62.5 U	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	72 - 84	0.39	1.6	---	NA	NA	12.5 U	NA	NA	NA	NA	NA	NA	
Arsenic, XRF	84 - 96	0.39	1.6	---	NA	NA	5 U	NA	NA	NA	NA	NA	NA	
Lead, XRF	0 - 3	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	0 - 6	400	800	1,200	983	573.5	459	3,434	1,879.5	699.5	404	631	5,512	
Lead, XRF	0 - 10	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	6 - 12	400	800	1,200	1,028	1,747	2,298.50	5,638.5	2,199.5	1,093.5	2,821.5	742	6,195.5	
Lead, XRF	6 - 16	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	12 - 18	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	2,034	NA	
Lead, XRF	12 - 22	400	800	1,200	NA	NA	NA	NA	NA	NA	2,576	NA	NA	
Lead, XRF	12 - 24	400	800	1,200	9,196.5	13,721.5	15,928.5	299.5	3,306	4,666.5	NA	NA	4,386	
Lead, XRF	24 - 32	400	800	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	24 - 34	400	800	1,200	4,996	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, XRF	24 - 36	400	800	1,200	NA	3,016	3,112.5	67.5	NA	NA	NA	NA	511	
Lead, XRF	36 - 48	400	800	1,200	NA	NA	2,417	NA	NA	NA	NA	NA	NA	
Lead, XRF	48 - 60	400	800	1,200	NA	NA	5,123.5	NA	NA	NA	NA	NA	NA	
Lead, XRF	60 - 72	400	800	1,200	NA	NA	5,175	NA	NA	NA	NA	NA	NA	
Lead, XRF	72 - 84	400	800	1,200	NA	NA	353	NA	NA	NA	NA	NA	NA	
Lead, XRF	84 - 96	400	800	1,200	NA	NA	11.3	NA	NA	NA	NA	NA	NA	

Notes:

Exceeds EPA Soil RSL - Residential

Exceeds EPA Soil RSL - Industrial and Residential

Exceeds 40 CFR Part 745 Lead Criteria and EPA Soil RSL - Industrial and Residential

1 U.S. EPA RSL for Residential Soil

2 U.S. EPA RSL for Industrial Soil

3 Code of Federal Regulations

ID - Identification

NA - Not analyzed

ppm - Part per million

RSL - Regional Screening Level

U - Not detected

bgs - Below ground surface

U.S. EPA - United States Environmental Protection Agency

analytical Results  
details  
nty, Illinois

LM-SB07	LM-SB07	LM-SB10	LM-SB10	LM-SB14	LM-SB14	LM-SB14	LM-SB15
LM-SB07-(6-12)- 112712	LM-SB07-(12-24)- 112712	LM-SB10-(24-36)- 112712	LM-SB10-(24-36)- 112712D	LM-SB14-(6-12)- 112712	LM-SB14-(12-24)- 112712	LM-SB14-(24-32)- 112712	LM-SB15-(12-24)- 112712
11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012
6- 12	12- 24	24- 36	24- 36	6- 12	12- 24	24- 32	12- 24
NA	NA	NA	NA	NA	NA	0.022	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.17 U	NA
NA	NA	NA	NA	NA	NA	0.046 U	NA
NA	NA	NA	NA	NA	NA	0.17 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.023 U	NA
NA	NA	NA	NA	NA	NA	0.12 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.023 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.023 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.0046 U	NA
NA	NA	NA	NA	NA	NA	0.023 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.046 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.012 U	NA
NA	NA	NA	NA	NA	NA	0.035 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	66	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	12 U	NA
NA	NA	NA	NA	NA	NA	0.49 U	NA
NA	NA	NA	NA	NA	NA	0.49 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	3.8	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	7.7	NA
NA	NA	NA	NA	NA	NA	3.4	NA
NA	NA	NA	NA	NA	NA	4.9 U	NA
NA	NA	NA	NA	NA	NA	4.9 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	4.9 U	NA
NA	NA	NA	NA	NA	NA	4.9 U	NA
NA	NA	NA	NA	NA	NA	30	NA
NA	NA	NA	NA	NA	NA	64	NA
NA	NA	NA	NA	NA	NA	4.9 U	NA
NA	NA	NA	NA	NA	NA	56	NA
NA	NA	NA	NA	NA	NA	49	NA
NA	NA	NA	NA	NA	NA	33	NA
NA	NA	NA	NA	NA	NA	43	NA
NA	NA	NA	NA	NA	NA	12 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	12 U	NA

**Analytical Results**  
**Metallics**  
 County, Illinois

LM-SB07	LM-SB07	LM-SB10	LM-SB10	LM-SB14	LM-SB14	LM-SB14	LM-SB15
LM-SB07-(6-12)- 112712	LM-SB07-(12-24)- 112712	LM-SB10-(24-36)- 112712	LM-SB10-(24-36)- 112712D	LM-SB14-(6-12)- 112712	LM-SB14-(12-24)- 112712	LM-SB14-(24-32)- 112712	LM-SB15-(12-24)- 112712
11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012
6- 12	12- 24	24- 36	24- 36	6- 12	12- 24	24- 32	12- 24

NA	NA	NA	NA	NA	NA	9.8	NA
NA	NA	NA	NA	NA	NA	17	NA
NA	NA	NA	NA	NA	NA	5.3	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	130	NA
NA	NA	NA	NA	NA	NA	11	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	30	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	4.2	NA
NA	NA	NA	NA	NA	NA	0.49 U	NA
NA	NA	NA	NA	NA	NA	0.49 U	NA
NA	NA	NA	NA	NA	NA	0.49 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	0.49 U	NA
NA	NA	NA	NA	NA	NA	120	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	2.5 U	NA
NA	NA	NA	NA	NA	NA	120	NA
NA	NA	NA	NA	NA	NA	9.9 U	NA

NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.049 U	NA
NA	NA	NA	NA	NA	NA	0.024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA
NA	NA	NA	NA	NA	NA	0.0024 U	NA

NA	NA	NA	NA	NA	NA	0.12 U	NA
NA	NA	NA	NA	NA	NA	0.12 U	NA
NA	NA	NA	NA	NA	NA	0.12 U	NA
NA	NA	NA	NA	NA	NA	0.12 U	NA
NA	NA	NA	NA	NA	NA	0.12 U	NA
NA	NA	NA	NA	NA	NA	0.12 U	NA

#### **Analytical Results Metals County, Illinois**

## **Analytical Results Metals County, Illinois**

<b>LM-SB17</b>	<b>LM-SB17</b>	<b>LM-SB19</b>	<b>LM-SB23</b>	<b>LM-SB23</b>	<b>LM-SB23</b>
<b>LM-SB17-(12-24)-</b> 112712	<b>LM-SB17-(24-36)-</b> 112712	<b>LM-SB19-(12-24)-</b> 112712	<b>LM-SB23-(12-24)-</b> 112712	<b>LM-SB23-(6-12)-</b> 112712	<b>LM-SB23-(12-24)-</b> 112712
11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012
12- 24	24- 36	12- 24	12- 24	6- 12	12- 24

**Table 3**  
**Inorganic Soil Sample Analytical Results**  
**Loewenthal Metals**  
**Chicago, Cook County, Illinois**

Analytical Parameter	Location ID			LM-SB01	LM-SB03	LM-SB03	LM-SB05	LM-SB05	LM-SB07	LM-SB07
	Field Sample ID			LM-SB01-(0-10)-112712	LM-SB03-(12-24)-112712	LM-SB03-(24-36)-112712	LM-SB05-(6-16)-112712	LM-SB05-(6-16)-112712D	LM-SB07-(6-12)-112712	LM-SB07-(12-24)-112712
	Sampling Date			11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012
	Depth Interval (inches bgs)			0- 10	12- 24	24- 36	6- 16	6- 16	6- 12	12- 24
40 CFR part 261 <sup>1</sup>	U.S. EPA RSL-Res <sup>2</sup>	U.S. EPA RSL-Ind <sup>3</sup>	40 CFR Part 745 <sup>4</sup>							
pH (S.U.)										
pH	≤2.5 or ≥12.5	NL	NL	8.6	7.9	8.5	7.9	NA	8.5	8.4
RCRA Metals (mg/kg)										
Arsenic	NL	0.39	1.6	4.9	16	11	6.2	NA	5.2	5.8
Barium	NL	15,000	190,000	140	1,200	280	110	NA	430	210
Cadmium	NL	70	800	5	61	11	7	NA	4.5	3.2
Chromium	NL	NL	NL	7.8	19	14	8	NA	20	17
Copper	NL	3,100	41,000	240	7,000	340	12,000	NA	360	450
Lead	NL	400	800	1,200	1,200	23,000	3,100	1,100	NA	2,200
Manganese	NL	1,800	23,000	230	410	190	150	NA	310	510
Mercury	NL	10	43	0.38	10	1.8	0.24	NA	0.46	0.4
Selenium	NL	390	5,100	1.3 U	4.6	1.8	1.3	NA	1.1 U	0.98 U
Silver	NL	390	5,100	1.3 U	2.8	1.2 U	2.3	NA	1.1 U	0.98 U
Zinc	NL	23,000	310,000	890	37,000	3,900	19,000	NA	1600	1,300
TCLP Metals (mg/L)										
Arsenic, TCLP	5	NL	NL	NA	NA	NA	0.011	NA	NA	NA
Barium, TCLP	100	NL	NL	NA	NA	NA	0.5 U	NA	NA	NA
Cadmium, TCLP	1	NL	NL	NA	NA	NA	0.12	NA	NA	NA
Chromium, TCLP	5	NL	NL	NA	NA	NA	0.01 U	NA	NA	NA
Copper, TCLP	NL	NL	NL	NA	NA	NA	4	NA	NA	NA
Lead, TCLP	5	NL	NL	NA	NA	NA	2.2	NA	NA	NA
Manganese, TCLP	NL	NL	NL	NA	NA	NA	1.2	NA	NA	NA
Mercury, TCLP	0.2	NL	NL	NA	NA	NA	0.0002 U	NA	NA	NA
Selenium, TCLP	1	NL	NL	NA	NA	NA	0.01 U	NA	NA	NA
Silver, TCLP	5	NL	NL	NA	NA	NA	0.01 U	NA	NA	NA
Zinc, TCLP	NL	NL	NL	NA	NA	NA	120	NA	NA	NA

**Table 3**  
**Inorganic Soil Sample Analytical Results**  
**Loewenthal Metals**  
**Chicago, Cook County, Illinois**

Analytical Parameter	Location ID				LM-SB10	LM-SB10	LM-SB14	LM-SB14	LM-SB14	LM-SB15
	Field Sample ID				LM-SB10-(24-36)-112712	LM-SB10-(24-36)-112712D	LM-SB14-(6-12)-112712	LM-SB14-(12-24)-112712	LM-SB14-(24-32)-112712	LM-SB15-(12-24)-112712
	Sampling Date				11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012
	Depth Interval (inches bgs)		24- 36	24- 36	6- 12	12- 24	24- 32	12- 24		
40 CFR part 261 <sup>1</sup>	U.S. EPA RSL-Res <sup>2</sup>	U.S. EPA RSL-Ind <sup>3</sup>	40 CFR Part 745 <sup>4</sup>							
pH (S.U.)										
pH	<2.5 or ≥12.5	NL	NL		8	7.6	8.6	8.2	8.4	7.9
<b>RCRA Metals (mg/kg)</b>										
Arsenic	NL	0.39	1.6		40	10	4.2	2.8	10	5.4
Barium	NL	15,000	190,000		240	210	970	1,800	360	660
Cadmium	NL	70	800		1.8	1.8	1.4	4.4	25	19
Chromium	NL	NL	NL		8.9	11	15	28	50	63
Copper	NL	3,100	41,000		680	990	93	240	4,500	6,000
Lead	NL	400	800	1,200	13,000	3,400	980	3,300	9,700	13,000
Manganese	NL	1,800	23,000		230	320	200	130	610	170
Mercury	NL	10	43		3.6	1.6	0.22	0.23	1.6	2
Selenium	NL	390	5,100		1.1 U	1 U	0.93 U	1.2 U	1.5 U	1.4 U
Silver	NL	390	5,100		1.5	1 U	0.93 U	1.2 U	2.9	2.4
Zinc	NL	23,000	310,000		620	930	780	1,000	12,000	5,500
<b>TCLP Metals (mg/L)</b>										
Arsenic, TCLP	5	NL	NL		NA	NA	NA	NA	0.01 U	NA
Barium, TCLP	100	NL	NL		NA	NA	NA	NA	0.85	NA
Cadmium, TCLP	1	NL	NL		NA	NA	NA	NA	0.35	NA
Chromium, TCLP	5	NL	NL		NA	NA	NA	NA	0.01 U	NA
Copper, TCLP	NL	NL	NL		NA	NA	NA	NA	2.3	NA
Lead, TCLP	5	NL	NL		NA	NA	NA	NA	16	NA
Manganese, TCLP	NL	NL	NL		NA	NA	NA	NA	3.3	NA
Mercury, TCLP	0.2	NL	NL		NA	NA	NA	NA	0.0002 U	NA
Selenium, TCLP	1	NL	NL		NA	NA	NA	NA	0.01 U	NA
Silver, TCLP	5	NL	NL		NA	NA	NA	NA	0.01 U	NA
Zinc, TCLP	NL	NL	NL		NA	NA	NA	NA	92	NA

**Table 3**  
**Inorganic Soil Sample Analytical Results**  
**Loewenthal Metals**  
**Chicago, Cook County, Illinois**

Analytical Parameter	Location ID				LM-SB16	LM-SB16	LM-SB16	LM-SB17	LM-SB17	LM-SB19	LM-SB23	LM-SB23	LM-SB23
	Field Sample ID				LM-SB16-(0-6)-112712	LM-SB16D-(12-24)-112712	LM-SB16-(24-36)-112712	LM-SB17-(12-24)-112712	LM-SB17-(24-36)-112712	LM-SB19-(12-24)-112712	LM-SB23-(6-12)-112712	LM-SB23-(12-24)-112712	LM-SB23-(12-24)-112712
	Sampling Date				11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012	11/27/2012
	Depth Interval (inches bgs)	0- 6	12- 24	24- 36	12- 24	24- 36	12- 24	12- 24	12- 24	6- 12	12- 24	12- 24	12- 24
40 CFR part 261 <sup>1</sup>	U.S. EPA RSL-Res <sup>2</sup>	U.S. EPA RSL-Ind <sup>3</sup>	40 CFR Part 745 <sup>4</sup>										
pH (S.U.)													
pH	<2.5 or ≥12.5	NL	NL		8.3	7.8	7.9	7.3	6.1	7.8	8.3	7.9	7.8
RCRA Metals (mg/kg)													
Arsenic	NL	0.39	1.6		4.6	46	15 J	5.1	25	9	12	15	20
Barium	NL	15,000	190,000		200	1,200	230	78	85	69	1,200	440	640
Cadmium	NL	70	800		2.3	47	25 J	1.4	9.6	10	17	16	26
Chromium	NL	NL	NL		13	51	14 J	7.5	13	14	29	11	12
Copper	NL	3,100	41,000		190	17,000	2,100	150	49	89	3,200	1,300	1,900
Lead	NL	400	800	1,200	610	22,000	7,400	1,600	110	200	5,700	3,600	7,900
Manganese	NL	1,800	23,000		410	520	190	320	130	100	290	300	400
Mercury	NL	10	43		0.25	8.8	7.8	0.59	0.067	0.11	1.1	5.6	53
Selenium	NL	390	5,100		1.1 U	5.1	1.7 J	1.2 U	3.2	1.4 U	2.1	1.7	2
Silver	NL	390	5,100		1.1 U	9.2	1.7 J	1.2 U	1.4 U	1.4 U	1.6	12	1.7
Zinc	NL	23,000	310,000		860	21,000	14,000	1,900	1,300	1,400	6,200	9,300	9,500
TCLP Metals (mg/L)													
Arsenic, TCLP	5	NL	NL		NA	NA	0.01 U	NA	NA	NA	NA	NA	NA
Barium, TCLP	100	NL	NL		NA	NA	0.5 U	NA	NA	NA	NA	NA	NA
Cadmium, TCLP	1	NL	NL		NA	NA	0.74	NA	NA	NA	NA	NA	NA
Chromium, TCLP	5	NL	NL		NA	NA	0.01 U	NA	NA	NA	NA	NA	NA
Copper, TCLP	NL	NL	NL		NA	NA	19	NA	NA	NA	NA	NA	NA
Lead, TCLP	5	NL	NL		NA	NA	76	NA	NA	NA	NA	NA	NA
Manganese, TCLP	NL	NL	NL		NA	NA	1.8	NA	NA	NA	NA	NA	NA
Mercury, TCLP	0.2	NL	NL		NA	NA	0.0002 U	NA	NA	NA	NA	NA	NA
Selenium, TCLP	1	NL	NL		NA	NA	0.01 U	NA	NA	NA	NA	NA	NA
Silver, TCLP	5	NL	NL		NA	NA	0.01 U	NA	NA	NA	NA	NA	NA
Zinc, TCLP	NL	NL	NL		NA	NA	510	NA	NA	NA	NA	NA	NA

Notes:

Exceeds EPA Soil RSL - Residential

Exceeds EPA Soil RSL - Industrial and Residential

Exceeds 40 CFR Part 475 Lead Criteria  
and EPA Soil RSL - Industrial and Residential

Exceeds 40 CFR Part 261 TCLP Criteria

1 Code of Federal Regulations part 261

2 U.S. EPA RSLs - Residential Soil Criteria

3 U.S. EPA RSLs - Industrial Soil Criteria

4 Code of Federal Regulations part 745 Lead Criteria

Notes:

bgs - Below ground surface

CFR - Code of Federal Regulations

ID - Identification

RSL - Regional Screening Level

J - Estimated value

mg/kg - Milligram per kilogram

mg/L - Milligram per liter

NA - Not analyzed

NL - Not listed

PCB - Polychlorinated biphenyl

RCRA - Resource Conservation and Recovery Act

S.U. - Standard unit

SVOC - Semivolatile organic compound

TCLP - Target Compound List

TCLP - Toxicity Characteristic Leaching Procedure

U - Not detected

U.S. EPA - United States Environmental Protection Agency

VOC - Volatile organic compound

**Table 4**  
**Concrete Sample Analytical Results**  
**Loewenthal Metals**  
**Chicago, Cook County, Illinois**

<b>Analytical Parameter</b>	<b>Field Sample ID</b>	<b>LM-Concrete-112712</b>
	<b>Sampling Date</b>	<b>11/27/2012</b>
<b>pH (S.U.)</b>		
pH		
		8.1
<b>RCRA Metals (mg/kg)</b>		
Arsenic		17
Barium		130
Cadmium		110
Chromium		51
Copper		320,000
Lead		24,000
Manganese		140
Mercury		0.5
Selenium		8.1
Silver		62
Zinc		58,000

Notes:

ID - Identification

mg/kg - Milligram per kilogram

RCRA - Resource Conservation and Recovery Act

S.U. - Standard unit

---

**APPENDIX A**  
**PHOTOGRAPHIC DOCUMENTATION**

---



**Site:** Loewenthal Metals

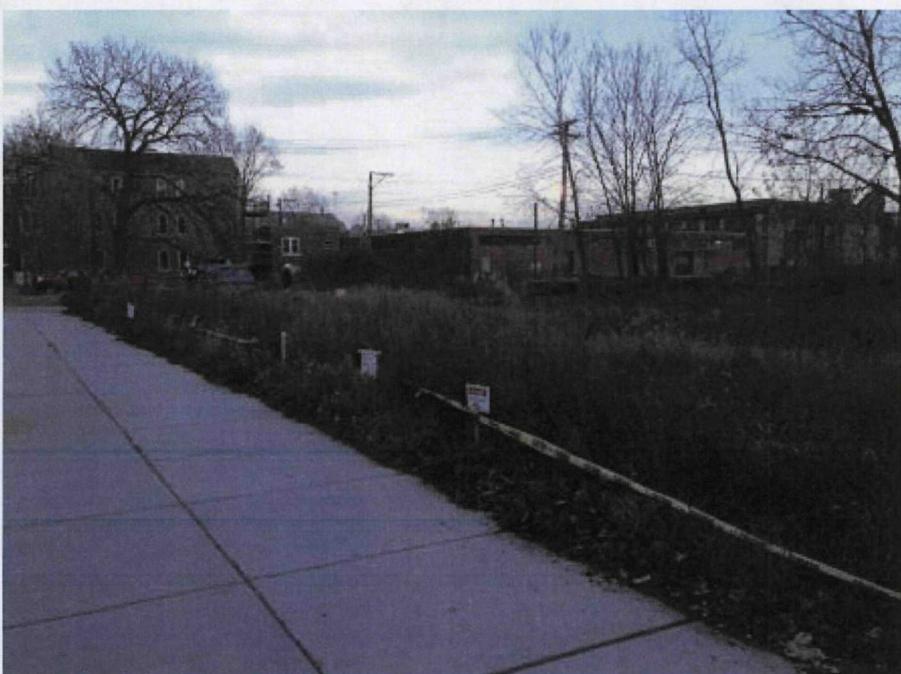
**Photograph No.:** 1

**Direction:** South

**Subject:** Elevated southern portion of Site and residential condos beyond

**Date:** 11/27/12

**Photographer:** Jonathan Colomb



**Site:** Loewenthal Metals

**Photograph No.:** 2

**Direction:** East

**Subject:** Northern Site boundary with resident-made "caution" signs

**Date:** 11/27/12

**Photographer:** Jonathan Colomb



**Site:** Loewenthal Metals

**Photograph No.:** 3

**Direction:** West

**Subject:** U.S. EPA warrant posted at the Site before site assessment

**Date:** 11/27/12

**Photographer:** Jonathan Colomb



**Site:** Loewenthal Metals

**Photograph No.:** 4

**Direction:** West

**Subject:** Two empty polyethylene drums present at the Site before the site assessment

**Date:** 11/27/12

**Photographer:** Jonathan Colomb



**Site:** Loewenthal Metals

**Photograph No.:** 5

**Direction:** West

**Subject:** U.S. EPA Geoprobe drilling at location on former concrete foundation

**Date:** 11/27/12

**Photographer:** Jonathan Colomb



**Site:** Loewenthal Metals

**Photograph No.:** 6

**Direction:** North

**Subject:** On-site decontamination station

**Date:** 11/27/12

**Photographer:** Jonathan Colomb

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**APPENDIX B**  
**FIELD BORING LOGS**

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The Trusted Integrator for Sustainable Solutions

Log of Boring: SB-01

Sheet: 1 of 1

Geologist: J. Carr

Date: 11/27/12 1115

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 70"	10 / 10	SM	Sandy sand; firm to coarse; ssm. small gravel; damp; no odor.  EOD @ 36" Recovery 10" wood chips in barrel.	0.0 0.7	

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SB-02

Sheet: 1 of 1

Geologist: J. Colborn

Date: 11/27/12 1450

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0-6"	6/16	SM	Sandy silt; fine to medium sand; dark brown; clumpy; no odor		
6-18	12/12	SL	Sandy silt; fine to coarse sand; small to medium gravel; dark brown; damp; no odor		
18-36		SM	same as above		

20' @ 36"

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 53-03

Sheet: 1 of 1

Geologist: J. Colombe

Date: 11/27/12 1435

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth: 3'

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0-9"	9/9	SM	Sandy silt; fine to med. Grained; dark brown; sm. gravel, no clay.		
9"-25"	16/16	Sm	Sandy silt; fine to med. Sand; dark brown; pulverized particle; clayey; no othe		
25- 35"	10/10	SM	same as above w/ sm. gravel		

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SB-05

Sheet: 1 of 1

Geologist: J. Coland

Date: 11/27/12 1425

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth: 115 "

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 9"	3/8	sm	Sandy silt; fine to medium gravel; dark brown; damp, no odor	2.0	
9" - 16"	3/8	sm	Sandy silty; fine to medium gravel; dark brown/black; strong petroleum odor; refusal @ 1.5'; tr. sm. gravel		collect extreme parameters

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 513-07

Sheet: 1 of 1

Geologist: J. Colantu

Date: 11/27/12 1120

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 6"	6 1/4	S.m	Sandy silt; f→ in sand; clastic brown; dry; no odor;		
6 - 20	10 1/4	S.m	Same as above; well cemented blocks; tr = sand. S.mud		
20 - 32	10 1/2	S.m	Sandy silt; some in → med. Gravel; t → c sand. Wood frags  EOB @ 36"		

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SB-03

Sheet: 1 of 1

Geologist: J. Colomby

Date: 12/12/12 1135

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0-3	3/3	SM	Sandy silt; F → coarse sand; sm → m. gravel, dark brown, dry. no odor  <i>Refusal @ 36'</i> Recovery of 3"; 6 attempts.	0-3	

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 53 - 04

Sheet: 1 of 1

Geologist: J. Cullen

Date: 11/27/12 1145

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
			N. Recovery		

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 58 - 10

Sheet: 1 of 1

Geologist: J. Colombe

Date: 11/27/12 1330

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 9"	9/9	SM	Sandy silt; Fine to coarse sand; 6 in. to m. gravel; dark brown; damp; no odor		
9 - 39"	29/29"	SM	Sandy silt; Fine to medium sand; light brown/dark brown; damp; no odor		EOB @ 39"

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SB-11

Sheet: 1 of 1

Geologist: J. Coburn

Date: 11/27/12 1410

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth: 36"

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0-4"	4/4	SM	Sandy silt; fine to medium sand; dark brown; clayey; no odor		
4 - 23	24/24	SM	Sandy silt; Fine to medium sand; light brown; trace silt; gravel; clayey; no odor		
23 - 36	3/3	SM	Sandy silt; fine to coarse sand; dark brown; clayey; no odor		

EOB @ 36"

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SB-13

Sheet: 1 of 1

Geologist: J. C. Smith

Date: 11/27/12 11:05

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 8"	3/4	SM	Ed sandy silt; dark brown; fine to medium grained; damp; no odor; tr. sm. gravel	0.0	
8 - 18"	10/10	SM	Same as above; weathered brick	0.0	
18 - 24"	6/4	SM	Sandy silt; f→ coarse; light brown; damp; no odor	0.0	
24 - 32"	3/2	SM	Same as above; light brown  43B @ 32"		

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 6B - 14

Sheet: 1 of 1

Geologist: J. Colson

Date: 11/27/12 1055

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0-4"	4/4	sm	Sandy silt; dark brown; few → med. gravel; damp; no odor		
4-12	3/8	sm	Sandy silt; F → m. Gravel; light brown; damp; no odor. Pervious brick		
12- 32	20/25	sm	Sandy silt; F → Coarse; tr. green small dark brown; wood chips. no odor		

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions.

Log of Boring: 513-15-

Sheet: 1 of 1

Geologist: J. Collier

Date: 11/27/12 1045

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0'-4'	2 4/4	SM	Silty sand; Sandy silt; dark brown; f → m; scattered brads; damp; no odor	0.0	
4'-20'	16 1/16	SM	Sandy silt; light brown; f → coarse; tr. small gravel; damp; no odor	0.0	
20'- 34'	14 1/4	SM	same as above; wood char; damp; no odor		

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SB -14

Sheet: 1 of 1

Geologist: J. Collier

Date: 11/17/12 1045

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 12"	12/12	sm	Sandy silt; f= sm; sand; light brown; pulvred; brick; clay; no odor	0-13	
12 - 24	12/12	sm	Sandy silt; f= co course; dark brown; clay; sm. sand; no odor; th	0-2	
24 - 36	12/12	sm	Sandy silt; f= co. light brown; clay; no odors; fr. sm. th.  298 @ 36"		

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SG - 16D

Sheet: 1 of 1

Geologist: J. Cole et al

Date: 11/27/12 1500

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0- 9"	9/9	SM	Sandy silt; fine to medium sand; dark brown; damp; pell-mell brick; no odor		
9"-24"	15/15	SM	Sandy silt; fine to medium sand; dark brown; tr. by small gravel; damp; no odor		
24-32	43 / 43	SM	Sandy silt; fine to medium sand; dark brown; damp; no odor		
32-38	6/6		Same as above		
38- 102	30 / 30	SP	Possibly graded fine to medium sand; light brown; damp; no odor GGB @ 9'		

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 513 - 17

Sheet: 1 of 1

Geologist: S. Calvert

Date: 11/27/12 10:34

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth: 36 "

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 14"	42 14/14	SM	silty sand; f → m; tr. coarser; dark brown; dry; no od.	0.0	
14 - 24	19/10	SM	<u>sticky mud</u> sandy silt; dark brown; f → m sand; damp; no odor	0.6	
24 - 34	12/12		silty silt; f → coar surf; dark brown; damp; no odor	0.6	

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 5B-19

Sheet: 1 of 1

Geologist: J. Craig

Date: 11/27/12

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 9"	9/4"	SM	Silty sand; firm to mid grained. Some coarse, dark brown; some brick; dry; no odor	0.1	
9 - 11"	2/2	-	wood chips	1.0	
" - 12	11/11	SM	silty sand; f-m sand light brown; bitumen or bitc., no odor	2.4	
22 - 24	2/2	-	wood chips	24.1	
			EoB @ 24"		

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: GB-20

Sheet: 1 of 1

Geologist: J. Colant

Date:

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0-3"	3/3	SM	Sandy silt; fine sand; dark brown; damp; no odor.	0.0	
3-16"	13/13	SP	Pokey grained sand; fine to med. sand; dark brown; damp; no odor.	1.0	
16-24"	3/3	SM	Sandy silt; fine sand; dark brown; damp; no odor.  Refusal @ 24"	1.2	

Sample ID:

Time:

Well ID:

Duplicate:

Time:

Screen Interval:

MS/MSD:

Time:

Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SD-21

Sheet: 1 of 1

Geologist: J. Colombe

Date: 11/27/12 1000

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 2"	212	-	wood chips		
2 - 14"	12/12	SM	Silty sand; F > m some brick; damp; dark brown; no odo.	0.0	
14 - 22"	3/3	SP	poorly graded sand; F > m; dark brown; damp; wood chips; no odo.	0.0	

Retrun c 18"

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: 53-22

Sheet: 1 of 1

Geologist: J. Colombe

Date: 1/27/12 1016

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 2"	212	SM	Sandy silt; f → coarser sand; some small gravel; dark brown; dry, no odor	0.0	
2 - 10"	16/16	SP	Possibly gravelly sand; f → coarse; sm. gravel; dark brown; no odor	0.10	

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:



The Trusted Integrator for Sustainable Solutions

Log of Boring: SB - 23

Sheet: 1 of 1

Geologist: J. Colant

Date: 11/27/12 10:25

Sampling Method:

Project:

Drilling Company:

Location:

Foreman:

Depth:

Rig Type:

Depth (ft bgs)	Recovery (inches)	USCS Class.	Description	PID (ppm)	Other Observations
0 - 14"	14 / 14	SM	Silty sand; f → m sand; dark brown; damp; no odor	0.0	
14 - 24	10 / 10	SM	Sandy silt; f → m sand; dark brown; damp; no odor; H. sm. gravel		
24 - 40	14 / 16		Sandy silt; f → coarse sand; dark brown; damp; no odor; sm. gravel		2017 @ 40"

Sample ID:	Time:	Well ID:
Duplicate:	Time:	Screen Interval:
MS/MSD:	Time:	Water Depth:

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**APPENDIX C**  
**LABORATORY ANALYTICAL REPORT**  
**AND DATA VALIDATION REPORT**

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# **STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

December 10, 2012

Weston Solutions  
750 E. Bunker Court  
Suite 500  
Vernon Hills, IL 60061  
Telephone: (847) 918-4094  
Fax: (847) 918-4055

RE: Lowenthal Metals Chicago, IL

STAT Project No: 12110922

Dear Tonya Balla:

STAT Analysis received 23 samples for the referenced project on 11/27/2012 5:42:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Catia Giannini

Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

**Client:** Weston Solutions  
**Project:** Lowenthal Metals Chicago, IL  
**Lab Order:** 12110922

**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
12110922-001A	LM-SB03-(24-36)-112712		11/27/2012 2:35:00 PM	11/27/2012
12110922-002A	LM-SB15-(12-24)-112712		11/27/2012 10:45:00 AM	11/27/2012
12110922-003A	LM-SB16D-(12-24)-112712		11/27/2012 3:00:00 PM	11/27/2012
12110922-004A	LM-SB03-(12-24)-112712		11/27/2012 2:35:00 PM	11/27/2012
12110922-005A	LM-SB14-(6-12)-112712		11/27/2012 10:55:00 AM	11/27/2012
12110922-006A	LM-SB23-(6-12)-112712		11/27/2012 10:25:00 AM	11/27/2012
12110922-007A	LM-SB14-(12-24)-112712		11/27/2012 10:55:00 AM	11/27/2012
12110922-008A	LM-SB17-(24-36)-112712		11/27/2012 10:30:00 AM	11/27/2012
12110922-009A	LM-SB10-(24-36)-112712		11/27/2012 1:30:00 PM	11/27/2012
12110922-010A	LM-SB17-(12-24)-112712		11/27/2012 10:30:00 AM	11/27/2012
12110922-011A	LM-SB16-(0-6)-112712		11/27/2012 10:40:00 AM	11/27/2012
12110922-012A	LM-SB01-(0-10)-112712		11/27/2012 11:15:00 AM	11/27/2012
12110922-013A	LM-SB10-(24-36)-112712D		11/27/2012 1:30:00 PM	11/27/2012
12110922-014A	LM-SB07-(6-12)-112712		11/27/2012 11:20:00 AM	11/27/2012
12110922-015A	LM-SB07-(12-24)-112712		11/27/2012 2:50:00 PM	11/27/2012
12110922-016A	LM-SB19-(12-24)-112712		11/27/2012 9:35:00 AM	11/27/2012
12110922-017A	LM-SB23-(12-24)-112712		11/27/2012 10:25:00 AM	11/27/2012
12110922-018A	LM-SB23-(12-24)-112712D		11/27/2012 10:25:00 AM	11/27/2012
12110922-019A	LM-Concrete-112712		11/27/2012 2:10:00 PM	11/27/2012
12110922-020A	LM-SB14-(24-32)-112712		11/27/2012 10:55:00 AM	11/27/2012
12110922-020B	LM-SB14-(24-32)-112712		11/27/2012 10:55:00 AM	11/27/2012
12110922-021A	LM-SB16-(24-36)-112712		11/27/2012 10:40:00 AM	11/27/2012
12110922-021B	LM-SB16-(24-36)-112712		11/27/2012 10:40:00 AM	11/27/2012
12110922-022A	LM-SB05-(6-16)-112712		11/27/2012 2:25:00 PM	11/27/2012
12110922-022B	LM-SB05-(6-16)-112712		11/27/2012 2:25:00 PM	11/27/2012
12110922-023A	LM-SB05-(6-16)-112712D		11/27/2012 2:25:00 PM	11/27/2012

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**CLIENT:** Weston Solutions  
**Project:** Lowenthal Metals Chicago, IL  
**Lab Order:** 12110922

---

**CASE NARRATIVE**

The mercury Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample LM-SB10-(24-36)-112712 (12110922-009) had recovery outside control limits. The sample concentration is greater than four times the spike level used.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample LM-SB23-(6-12)-112712 (12110922-006) (Prep Batch 66385) had recoveries outside control limits. The sample, MS and MSD were redigested in batch 66455. Results are still outside control limits and reported from batch 66455

The metals Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample LM-SB23-(6-12)-112712 (12110922-006) had Chromium recovery outside control limits (126% (MS) recovery, QC limits 75-125%). The MS/MSD had recovery of other analytes outside of control limits, however the analyte concentration in the sample was greater than four times the spiking level for those elements.

The metals Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample LM-SB16-(24-36)-112712 (12110922-021) had the following outside control limits:

Arsenic: 73%/53% (MS/MSD) recovery (QC limits 75-125%)

Cadmium: 50% (MSD) recovery (QC limits 75-125%), 29% RPD, QC limit < 20%)

Chromium: 74%/49% (MS/MSD) recovery (QC limits 75-125%), 22% RPD, QC limit < 20%)

Selenium: 67%/57% (MS/MSD) recovery (QC limits 75-125%)

Silver: 295% (MS) recovery (QC limits 75-125%), 104% RPD, QC limit < 20%)

The MS/MSD had recovery of other analytes outside of control limits, however the analyte concentration in the sample was greater than four times the spike level for those elements.

The metals Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample LM-SB16-(24-36)-112712 (12110922-021) had relative percent difference(RPD) outside of control limits for the following elements:

Barium: 21% RPD, (QC limits < 20%)

Lead: 51% RPD, (QC limits < 20%)

Copper: 107% RPD, (QC limits < 20%)

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-001

**Client Sample ID:** LM-SB03-(24-36)-112712  
**Collection Date:** 11/27/2012 2:35:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			Prep Date: 11/30/2012 Analyst: LB
Mercury	1.8	0.21		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			Prep Date: 11/30/2012 Analyst: JG
Arsenic	11	1.2		mg/Kg-dry	10	11/30/2012
Barium	280	1.2		mg/Kg-dry	10	11/30/2012
Cadmium	11	0.6		mg/Kg-dry	10	11/30/2012
Chromium	14	1.2		mg/Kg-dry	10	11/30/2012
Copper	340	3		mg/Kg-dry	10	11/30/2012
Lead	3100	0.6		mg/Kg-dry	10	11/30/2012
Manganese	190	1.2		mg/Kg-dry	10	11/30/2012
Selenium	1.8	1.2		mg/Kg-dry	10	12/3/2012
Silver	ND	1.2		mg/Kg-dry	10	11/30/2012
Zinc	3900	60		mg/Kg-dry	100	12/5/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			Prep Date: 11/29/2012 Analyst: PBG
pH	8.5			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			Prep Date: 11/28/2012 Analyst: RW
Percent Moisture	7.6	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-002

**Client Sample ID:** LM-SB15-(12-24)-112712  
**Collection Date:** 11/27/2012 10:45:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>					
Mercury	2	0.22		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>					
Arsenic	5.4	1.4		mg/Kg-dry	10	12/3/2012
Barium	660	1.4		mg/Kg-dry	10	12/3/2012
Cadmium	19	0.72		mg/Kg-dry	10	12/3/2012
Chromium	63	1.4		mg/Kg-dry	10	12/3/2012
Copper	6000	36		mg/Kg-dry	100	12/4/2012
Lead	13000	7.2		mg/Kg-dry	100	12/4/2012
Manganese	170	14		mg/Kg-dry	100	12/4/2012
Selenium	ND	1.4		mg/Kg-dry	10	12/3/2012
Silver	2.4	1.4		mg/Kg-dry	10	12/3/2012
Zinc	5500	72		mg/Kg-dry	100	12/4/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>					
pH	7.9			pH Units	1	11/29/2012
<b>Percent Moisture</b>	<b>D2974</b>					
Percent Moisture	23.3	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB16D-(12-24)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 3:00:00 PM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-003

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	8.8	0.27		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	46	1.5		mg/Kg-dry	10	12/3/2012
Barium	1200	1.5		mg/Kg-dry	10	12/3/2012
Cadmium	47	0.77		mg/Kg-dry	10	12/3/2012
Chromium	51	1.5		mg/Kg-dry	10	12/3/2012
Copper	17000	190		mg/Kg-dry	500	12/4/2012
Lead	22000	39		mg/Kg-dry	500	12/4/2012
Manganese	520	77		mg/Kg-dry	500	12/4/2012
Selenium	5.1	1.5		mg/Kg-dry	10	12/3/2012
Silver	9.2	1.5		mg/Kg-dry	10	12/3/2012
Zinc	21000	390		mg/Kg-dry	500	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	7.8			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	31.0	0.2	*	wt%	1	11/29/2012

**Qualifiers:** ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions      **Client Sample ID:** LM-SB03-(12-24)-112712  
**Lab Order:** 12110922      **Collection Date:** 11/27/2012 2:35:00 PM  
**Project:** Lowenthal Metals Chicago, IL      **Matrix:** Soil  
**Lab ID:** 12110922-004

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	SW7471A	10	2.2	mg/Kg-dry	100	12/3/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B)	16	1.2	mg/Kg-dry	10	12/3/2012
Barium		1200	1.2	mg/Kg-dry	10	12/3/2012
Cadmium		61	0.6	mg/Kg-dry	10	12/3/2012
Chromium		19	1.2	mg/Kg-dry	10	12/3/2012
Copper		7000	150	mg/Kg-dry	500	12/4/2012
Lead		23000	30	mg/Kg-dry	500	12/4/2012
Manganese		410	60	mg/Kg-dry	500	12/4/2012
Selenium		4.6	1.2	mg/Kg-dry	10	12/3/2012
Silver		2.8	1.2	mg/Kg-dry	10	12/3/2012
Zinc		37000	300	mg/Kg-dry	500	12/4/2012
<b>pH (25 °C)</b>	SW9045C					
pH		7.9		pH Units	1	11/29/2012
<b>Percent Moisture</b>	D2974					
Percent Moisture		9.9	0.2	*	wt%	1
						Prep Date: 11/28/2012 Analyst: RW
						11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-005

**Client Sample ID:** LM-SB14-(6-12)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.22	0.018		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	4.2	0.93		mg/Kg-dry	10	12/3/2012
Barium	970	0.93		mg/Kg-dry	10	12/3/2012
Cadmium	1.4	0.46		mg/Kg-dry	10	12/3/2012
Chromium	15	0.93		mg/Kg-dry	10	12/3/2012
Copper	93	2.3		mg/Kg-dry	10	12/4/2012
Lead	980	0.46		mg/Kg-dry	10	12/4/2012
Manganese	200	0.93		mg/Kg-dry	10	12/4/2012
Selenium	ND	0.93		mg/Kg-dry	10	12/3/2012
Silver	ND	0.93		mg/Kg-dry	10	12/3/2012
Zinc	780	4.6		mg/Kg-dry	10	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.6			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	8.6	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-006

**Client Sample ID:** LM-SB23-(6-12)-112712  
**Collection Date:** 11/27/2012 10:25:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>					
Mercury	1.1	0.19		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>					
Arsenic	12	1.5		mg/Kg-dry	10	12/5/2012
Barium	1200	1.5		mg/Kg-dry	10	12/5/2012
Cadmium	17	0.75		mg/Kg-dry	10	12/5/2012
Chromium	29	1.5		mg/Kg-dry	10	12/5/2012
Copper	3200	37		mg/Kg-dry	100	12/5/2012
Lead	5700	0.75		mg/Kg-dry	10	12/5/2012
Manganese	290	1.5		mg/Kg-dry	10	12/5/2012
Selenium	2.1	1.5		mg/Kg-dry	10	12/5/2012
Silver	1.6	1.5		mg/Kg-dry	10	12/5/2012
Zinc	6200	75		mg/Kg-dry	100	12/5/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>					
pH	8.3			pH Units	1	11/29/2012
<b>Percent Moisture</b>	<b>D2974</b>					
Percent Moisture	11.4	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
HT - Sample received past holding time  
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB14-(12-24)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 10:55:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-007		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.23	0.02		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	2.8	1.2		mg/Kg-dry	10	12/3/2012
Barium	1800	1.2		mg/Kg-dry	10	12/3/2012
Cadmium	4.4	0.61		mg/Kg-dry	10	12/3/2012
Chromium	28	1.2		mg/Kg-dry	10	12/3/2012
Copper	240	3		mg/Kg-dry	10	12/4/2012
Lead	3300	0.61		mg/Kg-dry	10	12/4/2012
Manganese	130	1.2		mg/Kg-dry	10	12/4/2012
Selenium	ND	1.2		mg/Kg-dry	10	12/3/2012
Silver	ND	1.2		mg/Kg-dry	10	12/3/2012
Zinc	1000	6.1		mg/Kg-dry	10	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.2			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	11.5	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-008

**Client Sample ID:** LM-SB17-(24-36)-112712  
**Collection Date:** 11/27/2012 10:30:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	0.067	0.022		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>						
	<b>SW6020 (SW3050B)</b>					
Arsenic	25	1.4		mg/Kg-dry	10	12/3/2012
Barium	85	1.4		mg/Kg-dry	10	12/3/2012
Cadmium	9.6	0.69		mg/Kg-dry	10	12/3/2012
Chromium	13	1.4		mg/Kg-dry	10	12/3/2012
Copper	49	3.4		mg/Kg-dry	10	12/4/2012
Lead	110	0.69		mg/Kg-dry	10	12/4/2012
Manganese	130	1.4		mg/Kg-dry	10	12/4/2012
Selenium	3.2	1.4		mg/Kg-dry	10	12/3/2012
Silver	ND	1.4		mg/Kg-dry	10	12/3/2012
Zinc	1300	6.9		mg/Kg-dry	10	12/4/2012
<b>pH (25 °C)</b>						
pH	6.1			pH Units	1	11/29/2012
<b>Percent Moisture</b>						
Percent Moisture	21.3	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB10-(24-36)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 1:30:00 PM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-009

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	3.6	0.21		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	40	1.1		mg/Kg-dry	10	12/3/2012
Barium	240	1.1		mg/Kg-dry	10	12/3/2012
Cadmium	1.8	0.53		mg/Kg-dry	10	12/3/2012
Chromium	8.9	1.1		mg/Kg-dry	10	12/3/2012
Copper	680	53		mg/Kg-dry	200	12/4/2012
Lead	13000	11		mg/Kg-dry	200	12/4/2012
Manganese	230	21		mg/Kg-dry	200	12/4/2012
Selenium	ND	1.1		mg/Kg-dry	10	12/3/2012
Silver	1.5	1.1		mg/Kg-dry	10	12/3/2012
Zinc	620	110		mg/Kg-dry	200	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.0			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	5.9	0.2	*	wt%	1	11/29/2012

**Qualifiers:**

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- HT - Sample received past holding time
- \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-010

**Client Sample ID:** LM-SB17-(12-24)-112712  
**Collection Date:** 11/27/2012 10:30:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.59	0.021		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	5.1	1.2		mg/Kg-dry	10	12/3/2012
Barium	78	1.2		mg/Kg-dry	10	12/3/2012
Cadmium	1.4	0.58		mg/Kg-dry	10	12/3/2012
Chromium	7.5	1.2		mg/Kg-dry	10	12/3/2012
Copper	150	5.8		mg/Kg-dry	20	12/4/2012
Lead	1600	1.2		mg/Kg-dry	20	12/4/2012
Manganese	320	2.3		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.2		mg/Kg-dry	10	12/3/2012
Silver	ND	1.2		mg/Kg-dry	10	12/3/2012
Zinc	1900	12		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	7.3			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	15.8	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-011

**Client Sample ID:** LM-SB16-(0-6)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.25	0.021		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	4.6	1.1		mg/Kg-dry	10	12/3/2012
Barium	200	1.1		mg/Kg-dry	10	12/3/2012
Cadmium	2.3	0.55		mg/Kg-dry	10	12/3/2012
Chromium	13	1.1		mg/Kg-dry	10	12/3/2012
Copper	190	5.5		mg/Kg-dry	20	12/4/2012
Lead	610	1.1		mg/Kg-dry	20	12/4/2012
Manganese	410	2.2		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.1		mg/Kg-dry	10	12/3/2012
Silver	ND	1.1		mg/Kg-dry	10	12/3/2012
Zinc	860	11		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.3			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	10.9	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-012

**Client Sample ID:** LM-SB01-(0-10)-112712  
**Collection Date:** 11/27/2012 11:15:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	0.38	0.024		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>						
Arsenic	4.9	1.3		mg/Kg-dry	10	12/3/2012
Barium	140	1.3		mg/Kg-dry	10	12/3/2012
Cadmium	5	0.63		mg/Kg-dry	10	12/3/2012
Chromium	7.8	1.3		mg/Kg-dry	10	12/3/2012
Copper	240	6.3		mg/Kg-dry	20	12/4/2012
Lead	1200	1.3		mg/Kg-dry	20	12/4/2012
Manganese	230	2.5		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.3		mg/Kg-dry	10	12/3/2012
Silver	ND	1.3		mg/Kg-dry	10	12/3/2012
Zinc	890	13		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>						
pH	8.6			pH Units	1	11/30/2012
<b>Percent Moisture</b>						
Percent Moisture	17.1	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-013

**Client Sample ID:** LM-SB10-(24-36)-112712D  
**Collection Date:** 11/27/2012 1:30:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>				Prep Date: 12/3/2012	Analyst: LB
Mercury	1.6	0.21		mg/Kg-dry	10	12/4/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>				Prep Date: 11/30/2012	Analyst: JG
Arsenic	10	1		mg/Kg-dry	10	12/3/2012
Barium	210	1		mg/Kg-dry	10	12/3/2012
Cadmium	1.8	0.5		mg/Kg-dry	10	12/3/2012
Chromium	11	1		mg/Kg-dry	10	12/3/2012
Copper	990	5		mg/Kg-dry	20	12/4/2012
Lead	3400	1		mg/Kg-dry	20	12/4/2012
Manganese	320	2		mg/Kg-dry	20	12/4/2012
Selenium	ND	1		mg/Kg-dry	10	12/3/2012
Silver	ND	1		mg/Kg-dry	10	12/3/2012
Zinc	930	10		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>				Prep Date: 11/30/2012	Analyst: MNG
pH	7.6			pH Units	1	11/30/2012
<b>Percent Moisture</b>	<b>D2974</b>				Prep Date: 11/28/2012	Analyst: RW
Percent Moisture	5.8	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** I2110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** I2110922-014

**Client Sample ID:** LM-SB07-(6-12)-112712  
**Collection Date:** 11/27/2012 11:20:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.46	0.022		mg/Kg-dry	1	12/4/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	5.2	1.1		mg/Kg-dry	10	12/3/2012
Barium	430	1.1		mg/Kg-dry	10	12/3/2012
Cadmium	4.5	0.54		mg/Kg-dry	10	12/3/2012
Chromium	20	1.1		mg/Kg-dry	10	12/3/2012
Copper	360	5.4		mg/Kg-dry	20	12/4/2012
Lead	2200	1.1		mg/Kg-dry	20	12/4/2012
Manganese	310	2.2		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.1		mg/Kg-dry	10	12/3/2012
Silver	ND	1.1		mg/Kg-dry	10	12/3/2012
Zinc	1600	11		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.5			pH Units	1	11/30/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	12.6	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-015

**Client Sample ID:** LM-SB07-(12-24)-112712  
**Collection Date:** 11/27/2012 2:50:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.4	0.02		mg/Kg-dry	1	12/4/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	5.8	0.98		mg/Kg-dry	10	12/3/2012
Barium	210	0.98		mg/Kg-dry	10	12/3/2012
Cadmium	3.2	0.49		mg/Kg-dry	10	12/3/2012
Chromium	17	0.98		mg/Kg-dry	10	12/3/2012
Copper	450	4.9		mg/Kg-dry	20	12/4/2012
Lead	920	0.49		mg/Kg-dry	10	12/3/2012
Manganese	510	2		mg/Kg-dry	20	12/4/2012
Selenium	ND	0.98		mg/Kg-dry	10	12/3/2012
Silver	ND	0.98		mg/Kg-dry	10	12/3/2012
Zinc	1300	9.8		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.4			pH Units	1	11/30/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	11.3	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

Client: Weston Solutions

Client Sample ID: LM-SB19-(12-24)-112712

Lab Order: 12110922

Collection Date: 11/27/2012 9:35:00 AM

Project: Lowenthal Metals Chicago, IL

Matrix: Soil

Lab ID: 12110922-016

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	SW7471A 0.11	0.021		mg/Kg-dry	1	Prep Date: 12/3/2012 Analyst: LB 12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 9	1.4		mg/Kg-dry	10	Prep Date: 11/30/2012 Analyst: JG 12/3/2012
Barium	69	1.4		mg/Kg-dry	10	12/3/2012
Cadmium	10	0.69		mg/Kg-dry	10	12/3/2012
Chromium	14	1.4		mg/Kg-dry	10	12/3/2012
Copper	89	6.9		mg/Kg-dry	20	12/4/2012
Lead	200	0.69		mg/Kg-dry	10	12/3/2012
Manganese	100	2.8		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.4		mg/Kg-dry	10	12/3/2012
Silver	ND	1.4		mg/Kg-dry	10	12/3/2012
Zinc	1400	14		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>						
pH	SW9045C 7.8			pH Units	1	Prep Date: 11/30/2012 Analyst: MNG 11/30/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 20.1	0.2	*	wt%	1	Prep Date: 11/28/2012 Analyst: RW 11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB23-(12-24)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 10:25:00 AM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-017

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	5.6	0.23		mg/Kg-dry	10	12/4/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	15	1.3		mg/Kg-dry	10	12/3/2012
Barium	440	1.3		mg/Kg-dry	10	12/3/2012
Cadmium	16	0.65		mg/Kg-dry	10	12/3/2012
Chromium	11	1.3		mg/Kg-dry	10	12/3/2012
Copper	1300	33		mg/Kg-dry	100	12/4/2012
Lead	3600	0.65		mg/Kg-dry	10	12/3/2012
Manganese	300	13		mg/Kg-dry	100	12/4/2012
Selenium	1.7	1.3		mg/Kg-dry	10	12/3/2012
Silver	12	1.3		mg/Kg-dry	10	12/3/2012
Zinc	9300	65		mg/Kg-dry	100	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	7.9			pH Units	1	11/30/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	16.8	0.2	*	wt%	1	11/29/2012

**Qualifiers:** ND - Not Detected at the Reporting Limit

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-018

**Client Sample ID:** LM-SB23-(12-24)-112712D  
**Collection Date:** 11/27/2012 10:25:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	SW7471A 53	2.3		mg/Kg-dry	100	12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 20	1.2		mg/Kg-dry	10	12/4/2012
Barium	640	1.2		mg/Kg-dry	10	12/4/2012
Cadmium	26	0.62		mg/Kg-dry	10	12/4/2012
Chromium	12	1.2		mg/Kg-dry	10	12/4/2012
Copper	1900	31		mg/Kg-dry	100	12/4/2012
Lead	7900	6.2		mg/Kg-dry	100	12/4/2012
Manganese	400	1.2		mg/Kg-dry	10	12/4/2012
Selenium	2	1.2		mg/Kg-dry	10	12/4/2012
Silver	1.7	1.2		mg/Kg-dry	10	12/4/2012
Zinc	9500	62		mg/Kg-dry	100	12/4/2012
<b>pH (25 °C)</b>						
pH	SW9045C 7.8			pH Units	1	11/30/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 18.0	0.2	*	wt%	1	11/29/2012

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HT - Sample received past holding time

E - Value above quantitation range

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-019

**Client Sample ID:** LM-Concrete-112712  
**Collection Date:** 11/27/2012 2:10:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>				Prep Date: 12/3/2012	Analyst: LB
Mercury	0.5	0.02		mg/Kg-dry	1	12/4/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>				Prep Date: 11/30/2012	Analyst: JG
Arsenic	17	2		mg/Kg-dry	10	12/4/2012
Barium	130	2		mg/Kg-dry	10	12/4/2012
Cadmium	110	1		mg/Kg-dry	10	12/4/2012
Chromium	51	2		mg/Kg-dry	10	12/4/2012
Copper	320000	1000		mg/Kg-dry	2000	12/4/2012
Lead	24000	51		mg/Kg-dry	500	12/4/2012
Manganese	140	100		mg/Kg-dry	500	12/4/2012
Selenium	8.1	2		mg/Kg-dry	10	12/4/2012
Silver	62	2		mg/Kg-dry	10	12/4/2012
Zinc	58000	510		mg/Kg-dry	500	12/4/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>				Prep Date: 11/30/2012	Analyst: MNG
pH	8.1			pH Units	1	11/30/2012
<b>Percent Moisture</b>	<b>D2974</b>				Prep Date: 11/28/2012	Analyst: RW
Percent Moisture	2.7	0.2	*	wt%	1	11/29/2012

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Qualifiers: J - Analyte detected below quantitation limits

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B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-020

**Client Sample ID:** LM-SB14-(24-32)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>PCBs</b>	<b>SW8082 (SW3550B)</b>				Prep Date: 11/30/2012	Analyst: PDL
Aroclor 1016	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1221	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1232	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1242	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1248	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1254	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1260	ND	0.12		mg/Kg-dry	1	11/30/2012
<b>Pesticides</b>	<b>SW8081 (SW3550B)</b>				Prep Date: 11/30/2012	Analyst: PDL
4,4'-DDD	ND	0.0024		mg/Kg-dry	1	11/30/2012
4,4'-DDE	ND	0.0024		mg/Kg-dry	1	11/30/2012
4,4'-DDT	ND	0.0024		mg/Kg-dry	1	11/30/2012
Aldrin	ND	0.0024		mg/Kg-dry	1	11/30/2012
alpha-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
alpha-Chlordane	ND	0.0024		mg/Kg-dry	1	11/30/2012
beta-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
Chlordane	ND	0.024		mg/Kg-dry	1	11/30/2012
delta-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
Dieldrin	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endosulfan I	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endosulfan II	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endosulfan sulfate	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endrin	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endrin aldehyde	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endrin ketone	ND	0.0024		mg/Kg-dry	1	11/30/2012
gamma-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
gamma-Chlordane	ND	0.0024		mg/Kg-dry	1	11/30/2012
Heptachlor	ND	0.0024		mg/Kg-dry	1	11/30/2012
Heptachlor epoxide	ND	0.0024		mg/Kg-dry	1	11/30/2012
Methoxychlor	ND	0.0024		mg/Kg-dry	1	11/30/2012
Toxaphene	ND	0.049		mg/Kg-dry	1	11/30/2012
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>				Prep Date: 11/30/2012	Analyst: LB
Mercury	ND	0.0002		mg/L	1	12/3/2012
<b>Mercury</b>	<b>SW7471A</b>				Prep Date: 12/3/2012	Analyst: LB
Mercury	1.6	0.26		mg/Kg-dry	10	12/4/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>				Prep Date: 11/30/2012	Analyst: JG
Arsenic	10	1.5		mg/Kg-dry	10	12/4/2012

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions      **Client Sample ID:** LM-SB14-(24-32)-112712  
**Lab Order:** 12110922      **Collection Date:** 11/27/2012 10:55:00 AM  
**Project:** Lowenthal Metals Chicago, IL      **Matrix:** Soil  
**Lab ID:** 12110922-020

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Metals by ICP/MS</b>						
		<b>SW6020 (SW3050B)</b>			Prep Date: 11/30/2012	Analyst: JG
Barium	360	1.5		mg/Kg-dry	10	12/4/2012
Cadmium	25	0.77		mg/Kg-dry	10	12/4/2012
Chromium	50	1.5		mg/Kg-dry	10	12/4/2012
Copper	4500	39		mg/Kg-dry	100	12/4/2012
Lead	9700	7.7		mg/Kg-dry	100	12/4/2012
Manganese	610	1.5		mg/Kg-dry	10	12/4/2012
Selenium	ND	1.5		mg/Kg-dry	10	12/4/2012
Silver	2.9	1.5		mg/Kg-dry	10	12/4/2012
Zinc	12000	77		mg/Kg-dry	100	12/4/2012
<b>TCLP Metals by ICP/MS</b>						
		<b>SW1311/6020 (SW3005A)</b>			Prep Date: 11/29/2012	Analyst: JG
Arsenic	ND	0.01		mg/L	5	11/29/2012
Barium	0.85	0.5		mg/L	5	11/29/2012
Cadmium	0.35	0.005		mg/L	5	11/29/2012
Chromium	ND	0.01		mg/L	5	11/29/2012
Copper	2.3	0.1		mg/L	5	11/29/2012
Lead	16	0.005		mg/L	5	11/29/2012
Manganese	3.3	0.01		mg/L	5	11/29/2012
Selenium	ND	0.01		mg/L	5	11/29/2012
Silver	ND	0.01		mg/L	5	11/29/2012
Zinc	92	1		mg/L	100	11/30/2012
<b>Semivolatile Organic Compounds by GC/MS</b>						
		<b>SW8270C (SW3550B)</b>			Prep Date: 11/29/2012	Analyst: DM
Acenaphthene	7.7	0.49		mg/Kg-dry	1	11/29/2012
Acenaphthylene	3.4	0.49		mg/Kg-dry	1	11/29/2012
Aniline	ND	4.9		mg/Kg-dry	1	11/29/2012
Anthracene	30	0.49		mg/Kg-dry	1	11/29/2012
Benz(a)anthracene	64	2.4		mg/Kg-dry	5	11/30/2012
Benzidine	ND	4.9		mg/Kg-dry	1	11/29/2012
Benzo(a)pyrene	56	0.49		mg/Kg-dry	1	11/29/2012
Benzo(b)fluoranthene	49	0.49		mg/Kg-dry	1	11/29/2012
Benzo(g,h,i)perylene	33	0.49		mg/Kg-dry	1	11/29/2012
Benzo(k)fluoranthene	43	0.49		mg/Kg-dry	1	11/29/2012
Benzoic acid	ND	12		mg/Kg-dry	1	11/29/2012
Benzyl alcohol	ND	2.5		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethoxy)methane	ND	2.5		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg-dry	1	11/29/2012
Bis(2-ethylhexyl)phthalate	ND	12		mg/Kg-dry	1	11/29/2012
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg-dry	1	11/29/2012

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202- .

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-020

**Client Sample ID:** LM-SB14-(24-32)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
Butyl benzyl phthalate	ND	2.5	mg/Kg-dry	1		11/29/2012
Carbazole	9.8	2.5	mg/Kg-dry	1		11/29/2012
4-Chloroaniline	ND	2.5	mg/Kg-dry	1		11/29/2012
4-Chloro-3-methylphenol	ND	4.9	mg/Kg-dry	1		11/29/2012
2-Chloronaphthalene	ND	2.5	mg/Kg-dry	1		11/29/2012
2-Chlorophenol	ND	2.5	mg/Kg-dry	1		11/29/2012
4-Chlorophenyl phenyl ether	ND	2.5	mg/Kg-dry	1		11/29/2012
Chrysene	66	2.4	mg/Kg-dry	5		11/30/2012
Dibenz(a,h)anthracene	17	0.49	mg/Kg-dry	1		11/29/2012
Dibenzofuran	5.3	2.5	mg/Kg-dry	1		11/29/2012
1,2-Dichlorobenzene	ND	2.5	mg/Kg-dry	1		11/29/2012
1,3-Dichlorobenzene	ND	2.5	mg/Kg-dry	1		11/29/2012
1,4-Dichlorobenzene	ND	2.5	mg/Kg-dry	1		11/29/2012
3,3'-Dichlorobenzidine	ND	2.5	mg/Kg-dry	1		11/29/2012
2,4-Dichlorophenol	ND	2.5	mg/Kg-dry	1		11/29/2012
Diethyl phthalate	ND	2.5	mg/Kg-dry	1		11/29/2012
2,4-Dimethylphenol	ND	2.5	mg/Kg-dry	1		11/29/2012
Dimethyl phthalate	ND	2.5	mg/Kg-dry	1		11/29/2012
4,6-Dinitro-2-methylphenol	ND	4.9	mg/Kg-dry	1		11/29/2012
2,4-Dinitrophenol	ND	12	mg/Kg-dry	1		11/29/2012
2,4-Dinitrotoluene	ND	0.49	mg/Kg-dry	1		11/29/2012
2,6-Dinitrotoluene	ND	0.49	mg/Kg-dry	1		11/29/2012
Di-n-butyl phthalate	ND	2.5	mg/Kg-dry	1		11/29/2012
Di-n-octyl phthalate	ND	2.5	mg/Kg-dry	1		11/29/2012
Fluoranthene	130	2.4	mg/Kg-dry	5		11/30/2012
Fluorene	11	0.49	mg/Kg-dry	1		11/29/2012
Hexachlorobenzene	ND	2.5	mg/Kg-dry	1		11/29/2012
Hexachlorobutadiene	ND	2.5	mg/Kg-dry	1		11/29/2012
Hexachlorocyclopentadiene	ND	2.5	mg/Kg-dry	1		11/29/2012
Hexachloroethane	ND	2.5	mg/Kg-dry	1		11/29/2012
Indeno(1,2,3-cd)pyrene	30	0.49	mg/Kg-dry	1		11/29/2012
Isophorone	ND	2.5	mg/Kg-dry	1		11/29/2012
2-Methylnaphthalene	3.8	2.5	mg/Kg-dry	1		11/29/2012
2-Methylphenol	ND	2.5	mg/Kg-dry	1		11/29/2012
4-Methylphenol	ND	2.5	mg/Kg-dry	1		11/29/2012
Naphthalene	4.2	0.49	mg/Kg-dry	1		11/29/2012
2-Nitroaniline	ND	2.5	mg/Kg-dry	1		11/29/2012
3-Nitroaniline	ND	2.5	mg/Kg-dry	1		11/29/2012

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-020

**Client Sample ID:** LM-SB14-(24-32)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>			Prep Date: 11/29/2012	Analyst: DM	
4-Nitroaniline	ND	2.5		mg/Kg-dry	1	11/29/2012
2-Nitrophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
4-Nitrophenol	ND	4.9		mg/Kg-dry	1	11/29/2012
Nitrobenzene	ND	0.49		mg/Kg-dry	1	11/29/2012
N-Nitrosodi-n-propylamine	ND	0.49		mg/Kg-dry	1	11/29/2012
N-Nitrosodimethylamine	ND	2.5		mg/Kg-dry	1	11/29/2012
N-Nitrosodiphenylamine	ND	0.49		mg/Kg-dry	1	11/29/2012
2, 2'-oxybis(1-Chloropropane)	ND	2.5		mg/Kg-dry	1	11/29/2012
Pentachlorophenol	ND	0.49		mg/Kg-dry	1	11/29/2012
Phenanthrene	120	2.4		mg/Kg-dry	5	11/30/2012
Phenol	ND	2.5		mg/Kg-dry	1	11/29/2012
Pyrene	120	2.4		mg/Kg-dry	5	11/30/2012
Pyridine	ND	9.9		mg/Kg-dry	1	11/29/2012
1,2,4-Trichlorobenzene	ND	2.5		mg/Kg-dry	1	11/29/2012
2,4,5-Trichlorophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
2,4,6-Trichlorophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
<b>Volatile Organic Compounds by GC/MS</b>						
	<b>SW5035/8260B</b>			Prep Date: 11/27/2012	Analyst: ERP	
Acetone	ND	0.17		mg/Kg-dry	1	12/3/2012
Benzene	ND	0.012		mg/Kg-dry	1	12/3/2012
Bromodichloromethane	ND	0.012		mg/Kg-dry	1	12/3/2012
Bromoform	ND	0.012		mg/Kg-dry	1	12/3/2012
Bromomethane	ND	0.023		mg/Kg-dry	1	12/3/2012
2-Butanone	ND	0.17		mg/Kg-dry	1	12/3/2012
Carbon disulfide	ND	0.12		mg/Kg-dry	1	12/3/2012
Carbon tetrachloride	ND	0.012		mg/Kg-dry	1	12/3/2012
Chlorobenzene	ND	0.012		mg/Kg-dry	1	12/3/2012
Chloroethane	ND	0.023		mg/Kg-dry	1	12/3/2012
Chloroform	ND	0.012		mg/Kg-dry	1	12/3/2012
Chloromethane	ND	0.023		mg/Kg-dry	1	12/3/2012
Dibromochloromethane	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
1,2-Dichloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
1,2-Dichloropropane	ND	0.012		mg/Kg-dry	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0046		mg/Kg-dry	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0046		mg/Kg-dry	1	12/3/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-020

**Client Sample ID:** LM-SB14-(24-32)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Ethylbenzene	ND	0.012		mg/Kg-dry	1	12/3/2012
2-Hexanone	ND	0.046		mg/Kg-dry	1	12/3/2012
4-Methyl-2-pentanone	ND	0.046		mg/Kg-dry	1	12/3/2012
Methylene chloride	ND	0.023		mg/Kg-dry	1	12/3/2012
Methyl tert-butyl ether	ND	0.012		mg/Kg-dry	1	12/3/2012
Styrene	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
Tetrachloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
Toluene	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1,1-Trichloroethane	0.022	0.012		mg/Kg-dry	1	12/3/2012
1,1,2-Trichloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
Trichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
Vinyl chloride	ND	0.012		mg/Kg-dry	1	12/3/2012
Xylenes, Total	ND	0.035		mg/Kg-dry	1	12/3/2012
<b>pH (25 °C)</b>						
pH			<b>SW9045C</b>		Prep Date: 11/30/2012	Analyst: MNG
	8.4			pH Units	1	11/30/2012
<b>Percent Moisture</b>						
Percent Moisture			<b>D2974</b>		Prep Date: 11/28/2012	Analyst: RW
	33.5	0.2	*	wt%	1	11/29/2012

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB16-(24-36)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 10:40:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-021		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>PCBs</b>						
Aroclor 1016	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1221	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1232	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1242	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1248	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1254	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1260	ND	0.092		mg/Kg-dry	1	11/30/2012
<b>Pesticides</b>						
4,4'-DDD	ND	0.0018		mg/Kg-dry	1	11/30/2012
4,4'-DDE	ND	0.0018		mg/Kg-dry	1	11/30/2012
4,4'-DDT	ND	0.0018		mg/Kg-dry	1	11/30/2012
Aldrin	ND	0.0018		mg/Kg-dry	1	11/30/2012
alpha-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
alpha-Chlordane	ND	0.0018		mg/Kg-dry	1	11/30/2012
beta-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
Chlordane	ND	0.018		mg/Kg-dry	1	11/30/2012
delta-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
Dieldrin	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endosulfan I	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endosulfan II	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endosulfan sulfate	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endrin	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endrin aldehyde	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endrin ketone	ND	0.0018		mg/Kg-dry	1	11/30/2012
gamma-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
gamma-Chlordane	ND	0.0018		mg/Kg-dry	1	11/30/2012
Heptachlor	ND	0.0018		mg/Kg-dry	1	11/30/2012
Heptachlor epoxide	ND	0.0018		mg/Kg-dry	1	11/30/2012
Methoxychlor	ND	0.0018		mg/Kg-dry	1	11/30/2012
Toxaphene	ND	0.038		mg/Kg-dry	1	11/30/2012
<b>TCLP Mercury</b>						
Mercury	ND	0.0002		mg/L	1	12/3/2012
<b>Mercury</b>						
Mercury	7.8	1.8		mg/Kg-dry	100	12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	15	1		mg/Kg-dry	10	11/30/2012

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-021

**Client Sample ID:** LM-SB16-(24-36)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Metals by ICP/MS</b>						
			<b>SW6020 (SW3050B)</b>		Prep Date: 11/30/2012	Analyst: JG
Barium	230	1		mg/Kg-dry	10	11/30/2012
Cadmium	25	0.52		mg/Kg-dry	10	11/30/2012
Chromium	14	1		mg/Kg-dry	10	11/30/2012
Copper	2100	130		mg/Kg-dry	500	12/3/2012
Lead	7400	26		mg/Kg-dry	500	12/3/2012
Manganese	190	1		mg/Kg-dry	10	11/30/2012
Selenium	1.7	1		mg/Kg-dry	10	11/30/2012
Silver	1.7	1		mg/Kg-dry	10	11/30/2012
Zinc	14000	260		mg/Kg-dry	500	12/3/2012
<b>TCLP Metals by ICP/MS</b>						
			<b>SW1311/6020 (SW3005A)</b>		Prep Date: 11/29/2012	Analyst: JG
Arsenic	ND	0.01		mg/L	5	11/29/2012
Barium	ND	0.5		mg/L	5	11/29/2012
Cadmium	0.74	0.005		mg/L	5	11/29/2012
Chromium	ND	0.01		mg/L	5	11/29/2012
Copper	19	2		mg/L	100	11/30/2012
Lead	76	1		mg/L	1000	11/30/2012
Manganese	1.8	0.01		mg/L	5	11/29/2012
Selenium	ND	0.01		mg/L	5	11/29/2012
Silver	ND	0.01		mg/L	5	11/29/2012
Zinc	510	10		mg/L	1000	11/30/2012
<b>Semivolatile Organic Compounds by GC/MS</b>						
			<b>SW8270C (SW3550B)</b>		Prep Date: 11/29/2012	Analyst: DM
Acenaphthene	2.4	0.038		mg/Kg-dry	1	11/29/2012
Acenaphthylene	0.87	0.038		mg/Kg-dry	1	11/29/2012
Aniline	ND	0.38		mg/Kg-dry	1	11/29/2012
Anthracene	5.3	0.19		mg/Kg-dry	5	11/30/2012
Benz(a)anthracene	13	0.19		mg/Kg-dry	5	11/30/2012
Benzidine	ND	0.38		mg/Kg-dry	1	11/29/2012
Benzo(a)pyrene	12	0.19		mg/Kg-dry	5	11/30/2012
Benzo(b)fluoranthene	11	0.19		mg/Kg-dry	5	11/30/2012
Benzo(g,h,i)perylene	6.5	0.19		mg/Kg-dry	5	11/30/2012
Benzo(k)fluoranthene	9.1	0.19		mg/Kg-dry	5	11/30/2012
Benzoic acid	ND	0.95		mg/Kg-dry	1	11/29/2012
Benzyl alcohol	ND	0.19		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethoxy)methane	ND	0.19		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethyl)ether	ND	0.19		mg/Kg-dry	1	11/29/2012
Bis(2-ethylhexyl)phthalate	ND	0.95		mg/Kg-dry	1	11/29/2012
4-Bromophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	11/29/2012

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Qualifiers: J - Analyte detected below quantitation limits

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R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-021

**Client Sample ID:** LM-SB16-(24-36)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>				Prep Date: 11/29/2012	Analyst: DM
Butyl benzyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
Carbazole	2.8	0.19		mg/Kg-dry	1	11/29/2012
4-Chloroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Chloro-3-methylphenol	ND	0.38		mg/Kg-dry	1	11/29/2012
2-Chloronaphthalene	ND	0.19		mg/Kg-dry	1	11/29/2012
2-Chlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Chlorophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	11/29/2012
Chrysene	14	0.19		mg/Kg-dry	5	11/30/2012
Dibenz(a,h)anthracene	3.5	0.038		mg/Kg-dry	1	11/29/2012
Dibenzofuran	1.4	0.19		mg/Kg-dry	1	11/29/2012
1,2-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
1,3-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
1,4-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
3,3'-Dichlorobenzidine	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4-Dichlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Diethyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4-Dimethylphenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Dimethyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
4,6-Dinitro-2-methylphenol	ND	0.38		mg/Kg-dry	1	11/29/2012
2,4-Dinitrophenol	ND	0.95		mg/Kg-dry	1	11/29/2012
2,4-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	11/29/2012
2,6-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	11/29/2012
Di-n-butyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
Di-n-octyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
Fluoranthene	13	0.19		mg/Kg-dry	5	12/3/2012
Fluorene	2.5	0.038		mg/Kg-dry	1	11/29/2012
Hexachlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
Hexachlorobutadiene	ND	0.19		mg/Kg-dry	1	11/29/2012
Hexachlorocyclopentadiene	ND	0.19		mg/Kg-dry	1	11/29/2012
Hexachloroethane	ND	0.19		mg/Kg-dry	1	11/29/2012
Indeno(1,2,3-cd)pyrene	5.8	0.19		mg/Kg-dry	5	11/30/2012
Isophorone	ND	0.19		mg/Kg-dry	1	11/29/2012
2-Methylnaphthalene	0.89	0.19		mg/Kg-dry	1	11/29/2012
2-Methylphenol	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Methylphenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Naphthalene	1.9	0.038		mg/Kg-dry	1	11/29/2012
2-Nitroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012
3-Nitroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012

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RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-021

**Client Sample ID:** LM-SB16-(24-36)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
		<b>SW8270C (SW3550B)</b>				
4-Nitroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012
2-Nitrophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Nitrophenol	ND	0.38		mg/Kg-dry	1	11/29/2012
Nitrobenzene	ND	0.038		mg/Kg-dry	1	11/29/2012
N-Nitrosodi-n-propylamine	ND	0.038		mg/Kg-dry	1	11/29/2012
N-Nitrosodimethylamine	ND	0.19		mg/Kg-dry	1	11/29/2012
N-Nitrosodiphenylamine	ND	0.038		mg/Kg-dry	1	11/29/2012
2, 2'-oxybis(1-Chloropropane)	ND	0.19		mg/Kg-dry	1	11/29/2012
Pentachlorophenol	ND	0.038		mg/Kg-dry	1	11/29/2012
Phanthrene	22	0.19		mg/Kg-dry	5	11/30/2012
Phenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Pyrene	22	0.19		mg/Kg-dry	5	11/30/2012
Pyridine	ND	0.76		mg/Kg-dry	1	11/29/2012
1,2,4-Trichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4,5-Trichlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4,6-Trichlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
<b>Volatile Organic Compounds by GC/MS</b>						
		<b>SW5035/8260B</b>				
					<b>Prep Date: 11/27/2012</b>	<b>Analyst: ERP</b>
Acetone	ND	0.086		mg/Kg-dry	1	12/3/2012
Benzene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Bromodichloromethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
Bromoform	ND	0.0057		mg/Kg-dry	1	12/3/2012
Bromomethane	ND	0.011		mg/Kg-dry	1	12/3/2012
2-Butanone	ND	0.086		mg/Kg-dry	1	12/3/2012
Carbon disulfide	ND	0.057		mg/Kg-dry	1	12/3/2012
Carbon tetrachloride	ND	0.0057		mg/Kg-dry	1	12/3/2012
Chlorobenzene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Chloroethane	ND	0.011		mg/Kg-dry	1	12/3/2012
Chloroform	ND	0.0057		mg/Kg-dry	1	12/3/2012
Chloromethane	ND	0.011		mg/Kg-dry	1	12/3/2012
Dibromochloromethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,2-Dichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,2-Dichloropropane	ND	0.0057		mg/Kg-dry	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0023		mg/Kg-dry	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0023		mg/Kg-dry	1	12/3/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-021

**Client Sample ID:** LM-SB16-(24-36)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Ethylbenzene	ND	0.0057		mg/Kg-dry	1	12/3/2012
2-Hexanone	ND	0.023		mg/Kg-dry	1	12/3/2012
4-Methyl-2-pentanone	ND	0.023		mg/Kg-dry	1	12/3/2012
Methylene chloride	ND	0.011		mg/Kg-dry	1	12/3/2012
Methyl tert-butyl ether	ND	0.0057		mg/Kg-dry	1	12/3/2012
Styrene	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
Tetrachloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Toluene	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1,1-Trichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1,2-Trichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
Trichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Vinyl chloride	ND	0.0057		mg/Kg-dry	1	12/3/2012
Xylenes, Total	ND	0.017		mg/Kg-dry	1	12/3/2012
<b>pH (25 °C)</b>						
pH		SW9045C		Prep Date: 11/30/2012	Analyst: MNG	
	7.9			pH Units	1	11/30/2012
<b>Percent Moisture</b>						
Percent Moisture		D2974		Prep Date: 11/28/2012	Analyst: RW	
	13.0	0.2	*	wt%	1	11/29/2012

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-022

**Client Sample ID:** LM-SB05-(6-16)-112712  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>PCBs</b>						
Aroclor 1016	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1221	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1232	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1242	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1248	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1254	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1260	ND	0.093		mg/Kg-dry	1	11/30/2012
<b>Pesticides</b>						
			<b>SW8081 (SW3550B)</b>			Prep Date: 11/30/2012 Analyst: PDL
4,4'-DDD	ND	0.0019		mg/Kg-dry	1	11/30/2012
4,4'-DDE	ND	0.0019		mg/Kg-dry	1	11/30/2012
4,4'-DDT	ND	0.0019		mg/Kg-dry	1	11/30/2012
Aldrin	ND	0.0019		mg/Kg-dry	1	11/30/2012
alpha-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
alpha-Chlordane	ND	0.0019		mg/Kg-dry	1	11/30/2012
beta-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
Chlordane	ND	0.019		mg/Kg-dry	1	11/30/2012
delta-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
Dieldrin	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endosulfan I	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endosulfan II	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endosulfan sulfate	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endrin	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endrin aldehyde	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endrin ketone	ND	0.0019		mg/Kg-dry	1	11/30/2012
gamma-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
gamma-Chlordane	ND	0.0019		mg/Kg-dry	1	11/30/2012
Heptachlor	ND	0.0019		mg/Kg-dry	1	11/30/2012
Heptachlor epoxide	ND	0.0019		mg/Kg-dry	1	11/30/2012
Methoxychlor	ND	0.0019		mg/Kg-dry	1	11/30/2012
Toxaphene	ND	0.038		mg/Kg-dry	1	11/30/2012
<b>TCLP Mercury</b>						
Mercury			<b>SW1311/7470A</b>			Prep Date: 11/30/2012 Analyst: LB
	ND	0.0002		mg/L	1	12/3/2012
<b>Mercury</b>						
Mercury			<b>SW7471A</b>			Prep Date: 12/3/2012 Analyst: LB
	0.24	0.02		mg/Kg-dry	1	12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	6.2	1	<b>SW6020 (SW3050B)</b>			Prep Date: 11/30/2012 Analyst: JG
				mg/Kg-dry	10	12/4/2012

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-022

**Client Sample ID:** LM-SB05-(6-16)-112712  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Metals by ICP/MS</b>						
			<b>SW6020 (SW3050B)</b>		Prep Date: 11/30/2012	Analyst: JG
Barium	110	1		mg/Kg-dry	10	12/4/2012
Cadmium	7	0.52		mg/Kg-dry	10	12/4/2012
Chromium	8	1		mg/Kg-dry	10	12/4/2012
Copper	12000	130		mg/Kg-dry	500	12/4/2012
Lead	1100	0.52		mg/Kg-dry	10	12/4/2012
Manganese	150	1		mg/Kg-dry	10	12/4/2012
Selenium	1.3	1		mg/Kg-dry	10	12/4/2012
Silver	2.3	1		mg/Kg-dry	10	12/4/2012
Zinc	19000	260		mg/Kg-dry	500	12/4/2012
<b>TCLP Metals by ICP/MS</b>						
			<b>SW1311/6020 (SW3005A)</b>		Prep Date: 11/29/2012	Analyst: JG
Arsenic	0.011	0.01		mg/L	5	11/29/2012
Barium	ND	0.5		mg/L	5	11/29/2012
Cadmium	0.12	0.005		mg/L	5	11/29/2012
Chromium	ND	0.01		mg/L	5	11/29/2012
Copper	4	2		mg/L	100	11/30/2012
Lead	2.2	0.1		mg/L	100	11/30/2012
Manganese	1.2	0.01		mg/L	5	11/29/2012
Selenium	ND	0.01		mg/L	5	11/29/2012
Silver	ND	0.01		mg/L	5	11/29/2012
Zinc	120	1		mg/L	100	11/30/2012
<b>Semivolatile Organic Compounds by GC/MS</b>						
			<b>SW8270C (SW3550B)</b>		Prep Date: 11/29/2012	Analyst: DM
Acenaphthene	ND	0.38		mg/Kg-dry	1	11/29/2012
Acenaphthylene	0.97	0.38		mg/Kg-dry	1	11/29/2012
Aniline	ND	3.8		mg/Kg-dry	1	11/29/2012
Anthracene	3.9	0.38		mg/Kg-dry	1	11/29/2012
Benz(a)anthracene	5.4	0.38		mg/Kg-dry	1	11/29/2012
Benzidine	ND	3.8		mg/Kg-dry	1	11/29/2012
Benzo(a)pyrene	20	0.38		mg/Kg-dry	1	11/29/2012
Benzo(b)fluoranthene	6.2	0.38		mg/Kg-dry	1	11/29/2012
Benzo(g,h,i)perylene	8.6	0.38		mg/Kg-dry	1	11/29/2012
Benzo(k)fluoranthene	4.1	0.38		mg/Kg-dry	1	11/29/2012
Benzoic acid	ND	9.5		mg/Kg-dry	1	11/29/2012
Benzyl alcohol	ND	1.9		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethoxy)methane	ND	1.9		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethyl)ether	ND	1.9		mg/Kg-dry	1	11/29/2012
Bis(2-ethylhexyl)phthalate	ND	9.5		mg/Kg-dry	1	11/29/2012
4-Bromophenyl phenyl ether	ND	1.9		mg/Kg-dry	1	11/29/2012

ND - Not Detected at the Reporting Limit

**Qualifiers:** J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-022

**Client Sample ID:** LM-SB05-(6-16)-112712  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>					
Butyl benzyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
Carbazole	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Chloroaniline	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Chloro-3-methylphenol	ND	3.8	mg/Kg-dry	1		11/29/2012
2-Chloronaphthalene	ND	1.9	mg/Kg-dry	1		11/29/2012
2-Chlorophenol	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Chlorophenyl phenyl ether	ND	1.9	mg/Kg-dry	1		11/29/2012
Chrysene	14	0.38	mg/Kg-dry	1		11/29/2012
Dibenz(a,h)anthracene	2.8	0.38	mg/Kg-dry	1		11/29/2012
Dibenzofuran	ND	1.9	mg/Kg-dry	1		11/29/2012
1,2-Dichlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
1,3-Dichlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
1,4-Dichlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
3,3'-Dichlorobenzidine	ND	1.9	mg/Kg-dry	1		11/29/2012
2,4-Dichlorophenol	ND	1.9	mg/Kg-dry	1		11/29/2012
Diethyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
2,4-Dimethylphenol	ND	1.9	mg/Kg-dry	1		11/29/2012
Dimethyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
4,6-Dinitro-2-methylphenol	ND	3.8	mg/Kg-dry	1		11/29/2012
2,4-Dinitrophenol	ND	9.5	mg/Kg-dry	1		11/29/2012
2,4-Dinitrotoluene	ND	0.38	mg/Kg-dry	1		11/29/2012
2,6-Dinitrotoluene	ND	0.38	mg/Kg-dry	1		11/29/2012
Di-n-butyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
Di-n-octyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
Fluoranthene	7.5	0.38	mg/Kg-dry	1		11/29/2012
Fluorene	ND	0.38	mg/Kg-dry	1		11/29/2012
Hexachlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
Hexachlorobutadiene	ND	1.9	mg/Kg-dry	1		11/29/2012
Hexachlorocyclopentadiene	ND	1.9	mg/Kg-dry	1		11/29/2012
Hexachloroethane	ND	1.9	mg/Kg-dry	1		11/29/2012
Indeno(1,2,3-cd)pyrene	3.6	0.38	mg/Kg-dry	1		11/29/2012
Isophorone	ND	1.9	mg/Kg-dry	1		11/29/2012
2-Methylnaphthalene	ND	1.9	mg/Kg-dry	1		11/29/2012
2-Methylphenol	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Methylphenol	ND	1.9	mg/Kg-dry	1		11/29/2012
Naphthalene	ND	0.38	mg/Kg-dry	1		11/29/2012
2-Nitroaniline	ND	1.9	mg/Kg-dry	1		11/29/2012
3-Nitroaniline	ND	1.9	mg/Kg-dry	1		11/29/2012

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HT - Sample received past holding time

E - Value above quantitation range

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# STAT Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB05-(6-16)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 2:25:00 PM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-022		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>			Prep Date: 11/29/2012	Analyst: DM	
4-Nitroaniline	ND	1.9		mg/Kg-dry	1	11/29/2012
2-Nitrophenol	ND	1.9		mg/Kg-dry	1	11/29/2012
4-Nitrophenol	ND	3.8		mg/Kg-dry	1	11/29/2012
Nitrobenzene	ND	0.38		mg/Kg-dry	1	11/29/2012
N-Nitrosodi-n-propylamine	ND	0.38		mg/Kg-dry	1	11/29/2012
N-Nitrosodimethylamine	ND	1.9		mg/Kg-dry	1	11/29/2012
N-Nitrosodiphenylamine	ND	0.38		mg/Kg-dry	1	11/29/2012
2, 2'-oxybis(1-Chloropropane)	ND	1.9		mg/Kg-dry	1	11/29/2012
Pentachlorophenol	ND	0.38		mg/Kg-dry	1	11/29/2012
Phenanthrene	5.8	0.38		mg/Kg-dry	1	11/29/2012
Phenol	ND	1.9		mg/Kg-dry	1	11/29/2012
Pyrene	49	1.9		mg/Kg-dry	5	11/30/2012
Pyridine	ND	7.7		mg/Kg-dry	1	11/29/2012
1,2,4-Trichlorobenzene	ND	1.9		mg/Kg-dry	1	11/29/2012
2,4,5-Trichlorophenol	ND	1.9		mg/Kg-dry	1	11/29/2012
2,4,6-Trichlorophenol	ND	1.9		mg/Kg-dry	1	11/29/2012
<b>Volatile Organic Compounds by GC/MS</b>						
	<b>SW5035/8260B</b>			Prep Date: 11/27/2012	Analyst: ERP	
Acetone	ND	0.099		mg/Kg-dry	1	12/3/2012
Benzene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Bromodichloromethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
Bromoform	ND	0.0066		mg/Kg-dry	1	12/3/2012
Bromomethane	ND	0.013		mg/Kg-dry	1	12/3/2012
2-Butanone	ND	0.099		mg/Kg-dry	1	12/3/2012
Carbon disulfide	ND	0.066		mg/Kg-dry	1	12/3/2012
Carbon tetrachloride	ND	0.0066		mg/Kg-dry	1	12/3/2012
Chlorobenzene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Chloroethane	ND	0.013		mg/Kg-dry	1	12/3/2012
Chloroform	ND	0.0066		mg/Kg-dry	1	12/3/2012
Chloromethane	ND	0.013		mg/Kg-dry	1	12/3/2012
Dibromochloromethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,2-Dichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,2-Dichloropropane	ND	0.0066		mg/Kg-dry	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0026		mg/Kg-dry	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0026		mg/Kg-dry	1	12/3/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

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B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-022

**Client Sample ID:** LM-SB05-(6-16)-112712  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Ethylbenzene	ND	0.0066		mg/Kg-dry	1	12/3/2012
2-Hexanone	ND	0.026		mg/Kg-dry	1	12/3/2012
4-Methyl-2-pentanone	ND	0.026		mg/Kg-dry	1	12/3/2012
Methylene chloride	ND	0.013		mg/Kg-dry	1	12/3/2012
Methyl tert-butyl ether	ND	0.0066		mg/Kg-dry	1	12/3/2012
Styrene	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
Tetrachloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Toluene	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1,1-Trichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1,2-Trichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
Trichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Vinyl chloride	ND	0.0066		mg/Kg-dry	1	12/3/2012
Xylenes, Total	ND	0.02		mg/Kg-dry	1	12/3/2012
<b>pH (25 °C)</b>						
pH		7.9		pH Units	1	11/30/2012
<b>Percent Moisture</b>						
Percent Moisture		D2974		Prep Date: 11/28/2012	Analyst: RW	
	14.3	0.2	*	wt%	1	11/29/2012

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RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

Client: Weston Solutions

Client Sample ID: LM-SB05-(6-16)-112712D

Lab Order: 12110922

Collection Date: 11/27/2012 2:25:00 PM

Project: Lowenthal Metals Chicago, IL

Matrix: Soil

Lab ID: 12110922-023

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Acetone	0.098	0.077		mg/Kg	1	12/3/2012
Benzene	ND	0.0051		mg/Kg	1	12/3/2012
Bromodichloromethane	ND	0.0051		mg/Kg	1	12/3/2012
Bromoform	ND	0.0051		mg/Kg	1	12/3/2012
Bromomethane	ND	0.01		mg/Kg	1	12/3/2012
2-Butanone	ND	0.077		mg/Kg	1	12/3/2012
Carbon disulfide	ND	0.051		mg/Kg	1	12/3/2012
Carbon tetrachloride	ND	0.0051		mg/Kg	1	12/3/2012
Chlorobenzene	ND	0.0051		mg/Kg	1	12/3/2012
Chloroethane	ND	0.01		mg/Kg	1	12/3/2012
Chloroform	ND	0.0051		mg/Kg	1	12/3/2012
Chloromethane	ND	0.01		mg/Kg	1	12/3/2012
Dibromochloromethane	ND	0.0051		mg/Kg	1	12/3/2012
1,1-Dichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
1,2-Dichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
1,1-Dichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
1,2-Dichloropropane	ND	0.0051		mg/Kg	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0021		mg/Kg	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0021		mg/Kg	1	12/3/2012
Ethylbenzene	ND	0.0051		mg/Kg	1	12/3/2012
2-Hexanone	ND	0.021		mg/Kg	1	12/3/2012
4-Methyl-2-pentanone	ND	0.021		mg/Kg	1	12/3/2012
Methylene chloride	ND	0.01		mg/Kg	1	12/3/2012
Methyl tert-butyl ether	ND	0.0051		mg/Kg	1	12/3/2012
Styrene	ND	0.0051		mg/Kg	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.0051		mg/Kg	1	12/3/2012
Tetrachloroethene	ND	0.0051		mg/Kg	1	12/3/2012
Toluene	ND	0.0051		mg/Kg	1	12/3/2012
1,1,1-Trichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
1,1,2-Trichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
Trichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
Vinyl chloride	ND	0.0051		mg/Kg	1	12/3/2012
Xylenes, Total	ND	0.015		mg/Kg	1	12/3/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

CHAIN OF CUSTODY RECORD

Nº: 846679

Page: 1 of 2

Company: <u>Winton Solutions, Inc.</u>	P.O. No.:										
Project Number:	Client Tracking No.:										
Project Name: <u>Locust Woods</u>	Quote No.:										
Project Location: <u>Chicago IL</u>											
Sampler(s): <u>Jonette Co.</u>											
Report To: <u>Tanya Banks</u>	Phone: <u>847 918-4094</u>										
Fax:											
QC Level: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>	e-mail: <u>T.banks@wintonsolutions.com</u>										
Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	Results Needed:		Remarks	Lab No.:
								1	1		
LM-SB03-(24-36)-112712	11/27	1435	So	X	No	1	X	X	X		001
LM-SB15-(12-24)-112712	11/27	1045	So	X	No	1	X	X	X		002
LM-SB16D-(12-24)-112712	11/27	1500	So	X	No	1	X	X	X		003
LM-SB53-(12-24)-112712	11/27	1435	So	X	No	1	X	X	X		004
LM-SB14-(6-12)-112712	11/27	1055	So	X	No	1	X	X	X		005
LM-SB23(6-12)-112712	11/27	1025	So	X	No	1	X	X	X		006
LM-SB14-(12-24)-112712	11/27	1055	So	X	No	1	X	X	X		007
LM-SB17-(24-36)-112712	11/27	1030	So	X	No	1	X	X	X		008
LM-SB10-(24-36)-112712	11/27	1330	So	X	No	1	X	X	X		009
LM-SB17-(12-24)-112712	11/27	1030	So	X	No	1	X	X	X		010
LM-SB16-(6-12)-112712	11/27	1040	So	X	No	1	X	X	X		011
LM-SB31-(0-10)-112712	11/27	1115	So	X	No	1	X	X	X		012
LM-SB10-(24-36)-112712	11/27	1330	So	X	No	1	X	X	X		013
LM-SB27-(6-12)-112712	11/27	1120	So	X	No	1	X	X	X		014
LM-SB02-(12-24)-112712	11/27	1450	So	X	No	1	X	X	X		015
LM-SB14-(12-24)-112712	11/27	0935	So	X	No	1	X	X	X		016
LM-SB23-(12-24)-112712	11/27/12	1025	So	X	No	1	X	X	X		017
LM-SB23-(12-24)-112712	11/27/12	1025	So	X	No	1	X	X	X		018
LM-Concrete - 112712	11/27/12	1410	So	X	No	1	X	X	X		019
Relinquished by: (Signature)	Date/Time: <u>11/27/12 1240</u>	Comments:								Laboratory Work Order No.:	
Received by: (Signature)	Date/Time: <u>11/27/12 1742</u>									<u>12110922</u>	
Relinquished by: (Signature)	Date/Time:									Received on Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Received by: (Signature)	Date/Time:									Temperature: <u>1.9 °C</u>	
Relinquished by: (Signature)	Date/Time:	Preservation Code: A = None B = HNO <sub>3</sub> C = NaOH D = H <sub>2</sub> SO <sub>4</sub> E = HCl F = 5035/EnCore G = Other									
Received by: (Signature)	Date/Time:										

**CHAIN OF CUSTODY RECORD**

Nº: 846680

Page : 7 of 2

Relinquished by: (Signature)

Date/Time: 1/27/12 170 Comments:

Received by: (Signature)

Date/Time: 6/27/2017 4:22

Relinquished by: (Signature)

Date/Fine:

~~Received by: (Signature)~~

Date/Time:

Relinquished by: (Signature)

Date/Time:

Received by: (Signature)

Date/Time:

**Preservation Code:** A = None    B = HNO<sub>3</sub>    C = NaOH  
D = H<sub>2</sub>SO<sub>4</sub>    E = HCl    F = 5035/EnCore    G = Other

Laboratory Work Order No.:	
<b>210922</b>	
Received on ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature:	19°C

# STAT Analysis Corporation

## Sample Receipt Checklist

Client Name WESTON VERNON HILLS

Date and Time Received: 11/27/2012 5:42:00 PM

Work Order Number 12110922

Received by: CDF

Checklist completed by:

Signature

Date

11/27/12

Reviewed by:

Initials

KL

12-3-12  
Date

Matrix:

Carrier name: Client Delivered

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels/containers? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Container or Temp Blank temperature in compliance? Yes  No  Temperature 1.9 °C

Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No

Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_

Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

\_\_\_\_\_

Comments: \_\_\_\_\_

Client / Person contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_

**STAT Analysis Corporation**

CLIENT: Weston Solutions

Work Order: 12110922

Project: Lowenthal Metals Chicago, IL

Test No: SW5035/8260B Matrix: S

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VSTD050	99.6	104	99.2	104				
VBLK120312-2	94.9	104	100	111				
VLCS120312-2	102	103	103	109				
VLCSD120312-2	102	103	99.6	106				
12110922-020A	108	99.7	99.2	119				
12110922-021A	102	102	103	130				
12110922-022A	92.3	103	104	124				
12110922-023A	101	100	105	112				

Acronym	Surrogate	QC Limits
BR4FBZ	= 4-Bromofluorobenzene	44-114
BZMED8	= Toluene-d8	62-122
DBFM	= Dibromofluoromethane	74-150
DCA12D4	= 1,2-Dichloroethane-d4	78-160

\* Surrogate recovery outside acceptance limits

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85337

Sample ID: VBLK120312-2	SampType: MBLK	TestCode: VOC_ENCOD	Units: mg/Kg	Prep Date:	Run ID: VOA-2_121203A						
Client ID: ZZZZZ	Batch ID: R85337	TestNo: SW5035/8260		Analysis Date: 12/3/2012	SeqNo: 2298727						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	0.00053	0.0050									J
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	ND	0.0050									
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	0.00162	0.010									J
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85337

Sample ID: VBLK120312-2	SampType: MBLK	TestCode: VOC_ENCOD	Units: mg/Kg	Prep Date:			Run ID: VOA-2_121203A				
Client ID: ZZZZZ	Batch ID: R85337	TestNo: SW5035/8260		Analysis Date: 12/3/2012			SeqNo: 2298727				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									
Sample ID: VLCS120312-2	SampType: LCS	TestCode: VOC_ENCOD	Units: mg/Kg	Prep Date:			Run ID: VOA-2_121203A				
Client ID: ZZZZZ	Batch ID: R85337	TestNo: SW5035/8260		Analysis Date: 12/3/2012			SeqNo: 2298728				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.05564	0.0050	0.05	0	111	70	130	0	0	0	
1,1,2,2-Tetrachloroethane	0.05263	0.0050	0.05	0	105	70	130	0	0	0	
1,1,2-Trichloroethane	0.04958	0.0050	0.05	0	99.2	70	130	0	0	0	
1,1-Dichloroethane	0.05189	0.0050	0.05	0	104	70	130	0	0	0	
1,1-Dichloroethene	0.05258	0.0050	0.05	0	105	70	130	0	0	0	
1,2-Dichloroethane	0.0527	0.0050	0.05	0	105	70	130	0	0	0	
1,2-Dichloropropane	0.05123	0.0050	0.05	0	102	70	130	0	0	0	
2-Butanone	0.1171	0.075	0.1	0	117	70	130	0	0	0	
2-Hexanone	0.1034	0.020	0.1	0	103	70	130	0	0	0	
4-Methyl-2-pentanone	0.1044	0.020	0.1	0	104	70	130	0	0	0	
Acetone	0.1102	0.075	0.1	0	110	50	150	0	0	0	
Benzene	0.05127	0.0050	0.05	0	103	70	130	0	0	0	
Bromodichloromethane	0.05218	0.0050	0.05	0	104	70	130	0	0	0	
Bromoform	0.04992	0.0050	0.05	0	99.8	70	130	0	0	0	
Bromomethane	0.03697	0.010	0.05	0	73.9	70	130	0	0	0	
Carbon disulfide	0.1116	0.050	0.1	0	112	70	130	0	0	0	
Carbon tetrachloride	0.05347	0.0050	0.05	0	107	70	130	0	0	0	
Chlorobenzene	0.05619	0.0050	0.05	0	112	70	130	0	0	0	
Chloroethane	0.05495	0.010	0.05	0	110	70	130	0	0	0	
Chloroform	0.0512	0.0050	0.05	0.00053	101	70	130	0	0	0	
Chloromethane	0.05435	0.010	0.05	0	109	70	130	0	0	0	
cis-1,2-Dichloroethene	0.05301	0.0050	0.05	0	106	70	130	0	0	0	

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85337

Sample ID: VLCS120312-2	SampType: LCS	TestCode: VOC_ENCOR Units: mg/Kg			Prep Date:			Run ID: VOA-2_121203A			
Client ID: ZZZZZ	Batch ID: R85337	TestNo: SW5035/8260			Analysis Date: 12/3/2012			SeqNo: 2298728			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	0.05213	0.0020	0.05	0	104	70	130	0	0	0	
Dibromochloromethane	0.05229	0.0050	0.05	0	105	70	130	0	0	0	
Ethylbenzene	0.05084	0.0050	0.05	0	102	70	130	0	0	0	
Methyl tert-butyl ether	0.05436	0.0050	0.05	0	109	70	130	0	0	0	
Methylene chloride	0.04828	0.010	0.05	0.00162	93.3	70	130	0	0	0	
Styrene	0.04988	0.0050	0.05	0	99.8	70	130	0	0	0	
Tetrachloroethene	0.05209	0.0050	0.05	0	104	70	130	0	0	0	
Toluene	0.05328	0.0050	0.05	0	107	70	130	0	0	0	
trans-1,2-Dichloroethene	0.05045	0.0050	0.05	0	101	70	130	0	0	0	
trans-1,3-Dichloropropene	0.0549	0.0020	0.05	0	110	70	130	0	0	0	
Trichloroethene	0.05196	0.0050	0.05	0	104	70	130	0	0	0	
Vinyl chloride	0.04845	0.0050	0.05	0	96.9	70	130	0	0	0	
Xylenes, Total	0.1641	0.015	0.15	0	109	70	130	0	0	0	

Sample ID: VLCSD120312-2	SampType: LCSD	TestCode: VOC_ENCOR Units: mg/Kg			Prep Date:			Run ID: VOA-2_121203A			
Client ID: ZZZZZ	Batch ID: R85337	TestNo: SW5035/8260			Analysis Date: 12/3/2012			SeqNo: 2298729			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.05182	0.0050	0.05	0	104	70	130	0.05564	7.11	20	
1,1,2,2-Tetrachloroethane	0.05036	0.0050	0.05	0	101	70	130	0.05263	4.41	20	
1,1,2-Trichloroethane	0.04881	0.0050	0.05	0	97.6	70	130	0.04958	1.57	20	
1,1-Dichloroethane	0.04872	0.0050	0.05	0	97.4	70	130	0.05189	6.30	20	
1,1-Dichloroethene	0.04796	0.0050	0.05	0	95.9	70	130	0.05258	9.19	20	
1,2-Dichloroethane	0.04867	0.0050	0.05	0	97.3	70	130	0.0527	7.95	20	
1,2-Dichloropropane	0.05019	0.0050	0.05	0	100	70	130	0.05123	2.05	20	
2-Butanone	0.1	0.075	0.1	0	100	70	130	0.1171	15.7	20	
2-Hexanone	0.09635	0.020	0.1	0	96.4	70	130	0.1034	7.11	20	
4-Methyl-2-pentanone	0.09806	0.020	0.1	0	98.1	70	130	0.1044	6.30	20	
Acetone	0.1035	0.075	0.1	0	104	50	150	0.1102	6.31	20	
Benzene	0.05017	0.0050	0.05	0	100	70	130	0.05127	2.17	20	
Bromodichloromethane	0.04925	0.0050	0.05	0	98.5	70	130	0.05218	5.78	20	

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85337

Sample ID: VLCSD120312-2	SampType: LCSD	TestCode: VOC_ENCOR Units: mg/Kg			Prep Date:			Run ID: VOA-2_121203A			
Client ID: ZZZZZ	Batch ID: R85337	TestNo: SW5035/8260			Analysis Date: 12/3/2012			SeqNo: 2298729			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	0.04811	0.0050	0.05	0	96.2	70	130	0.04992	3.69	20	
Bromomethane	0.04063	0.010	0.05	0	81.3	70	130	0.03697	9.43	20	
Carbon disulfide	0.1022	0.050	0.1	0	102	70	130	0.1116	8.82	20	
Carbon tetrachloride	0.05188	0.0050	0.05	0	104	70	130	0.05347	3.02	20	
Chlorobenzene	0.05496	0.0050	0.05	0	110	70	130	0.05619	2.21	20	
Chloroethane	0.0512	0.010	0.05	0	102	70	130	0.05495	7.07	20	
Chloroform	0.04819	0.0050	0.05	0.00053	95.3	70	130	0.0512	6.06	20	
Chloromethane	0.04877	0.010	0.05	0	97.5	70	130	0.05435	10.8	20	
cis-1,2-Dichloroethene	0.04856	0.0050	0.05	0	97.1	70	130	0.05301	8.76	20	
cis-1,3-Dichloropropene	0.05027	0.0020	0.05	0	101	70	130	0.05213	3.63	20	
Dibromochloromethane	0.04835	0.0050	0.05	0	96.7	70	130	0.05229	7.83	20	
Ethylbenzene	0.04924	0.0050	0.05	0	98.5	70	130	0.05084	3.20	20	
Methyl tert-butyl ether	0.05096	0.0050	0.05	0	102	70	130	0.05436	6.46	20	
Methylene chloride	0.04653	0.010	0.05	0.00162	89.8	70	130	0.04828	3.69	20	
Styrene	0.0497	0.0050	0.05	0	99.4	70	130	0.04988	0.362	20	
Tetrachloroethene	0.04908	0.0050	0.05	0	98.2	70	130	0.05209	5.95	20	
Toluene	0.05171	0.0050	0.05	0	103	70	130	0.05328	2.99	20	
trans-1,2-Dichloroethene	0.04495	0.0050	0.05	0	89.9	70	130	0.05045	11.5	20	
trans-1,3-Dichloropropene	0.05132	0.0020	0.05	0	103	70	130	0.0549	6.74	20	
Trichloroethene	0.04809	0.0050	0.05	0	96.2	70	130	0.05196	7.74	20	
Vinyl chloride	0.04467	0.0050	0.05	0	89.3	70	130	0.04845	8.12	20	
Xylenes, Total	0.1554	0.015	0.15	0	104	70	130	0.1641	5.46	20	

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**STAT Analysis Corporation**

CLIENT: Weston Solutions

Work Order: 12110922

Project: Lowenthal Metals Chicago, IL

Test No: SW8270C

Matrix: S

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
MB-66366-SVOC	68.2	69.6	61.1	74.5	67.6	73.7	67.2	98.7
LCS-66366-SVOC	56.0	56.0	54.1	72.4	53.3	60.8	58.4	84.5
12110851-001BMS	73.2	71.9	71.1	90.7	68.8	79.6	76.1	93.6
12110851-001BMSD	69.5	67.2	67.9	89.6	65.4	76.7	72.7	87.6
12110922-020B	63.3	59.2	63.4	90.1	55.0	68.3	82.8	110
12110922-021B	68.9	65.4	65.7	89.8	63.1	72.6	77.3	97.2
12110922-022B	68.2	66.2	74.2	103	60.0	78.4	87.8	110

Acronym	Surrogate	QC Limits
CLPH2D4	= 2-Chlorophenol-d4	20-130
DCBZ12D4	= 1,2-Dichlorobenzene-d4	20-130
NO2BZD5	= Nitrobenzene-d5	23-120
PH246BR	= 2,4,6-Tribromophenol	19-122
PH2F	= 2-Fluorophenol	25-121
PHD5	= Phenol-d5	24-113
PHEN2F	= 2-Fluorobiphenyl	30-115
PHEND14	= 4-Terphenyl-d14	18-137

\* Surrogate recovery outside acceptance limits

**STAT Analysis Corporation****PREP BATCH REPORT**Prep Start Date: **11/29/2012 11:40:0**

Prep End Date:

Prep Factor Units:

**mL / Kg**Prep Batch **66366** Prep Code: **3550\_SVOC** Technician: **IP**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-66366-SVOC			0.03	0	0	1	33.333	11/29/2012	11/29/2012
LCS-66366-SVOC			0.03	0	0	1	33.333	11/29/2012	11/29/2012
12110851-001B	Soil		0.03035	0	0	1	32.949	11/29/2012	11/29/2012
12110871-001A	Soil		0.03055	0	0	1	32.733	11/29/2012	11/29/2012
12110871-002A	Soil		0.03019	0	0	1	33.124	11/29/2012	11/29/2012
12110871-003A	Soil		0.03017	0	0	1	33.146	11/29/2012	11/29/2012
12110920-001B	Soil		0.03059	0	0	1	32.690	11/29/2012	11/29/2012
12110922-020B	Soil		0.0304	0	0	10	328.947	11/29/2012	11/29/2012
12110922-021B	Soil		0.03024	0	0	1	33.069	11/29/2012	11/29/2012
12110922-022B	Soil		0.03053	0	0	10	327.547	11/29/2012	11/29/2012
12110924-009B	Soil		0.03014	0	0	1	33.179	11/29/2012	11/29/2012
12110924-012B	Soil		0.03068	0	0	1	32.595	11/29/2012	11/29/2012
12110924-014B	Soil		0.03037	0	0	10	329.272	11/29/2012	11/29/2012
12110924-020B	Soil		0.03013	0	0	1	33.190	11/29/2012	11/29/2012
12110924-034B	Soil		0.03029	0	0	1	33.014	11/29/2012	11/29/2012
12110924-036B	Soil		0.03043	0	0	1	32.862	11/29/2012	11/29/2012
12110936-001B	Soil		0.03065	0	0	1	32.626	11/29/2012	11/29/2012
12110936-002B	Soil		0.03058	0	0	1	32.701	11/29/2012	11/29/2012
12110936-003B	Soil		0.0303	0	0	1	33.003	11/29/2012	11/29/2012
12110851-001BMS	Soil		0.03034	0	0	1	32.960	11/29/2012	11/29/2012
12110851-001BMSD	Soil		0.03041	0	0	1	32.884	11/29/2012	11/29/2012
12110941-001A	Soil		0.03024	0	0	1	33.069	11/30/2012	11/30/2012
12110964-001A	Soil		0.03007	0	0	1	33.256	11/30/2012	11/30/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: 66366

Sample ID: MB-66366-SVOC	SampType: MBLK	TestCode: SVOC_SOIL	Units: mg/Kg	Prep Date: 11/29/2012	Run ID: SVOC-5_121129A						
Client ID: ZZZZZ	Batch ID: 66366	TestNo: SW8270C		Analysis Date: 11/29/2012	SeqNo: 2296913						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3'-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66366

Sample ID: MB-66366-SVOC	SampType: MBLK	TestCode: SVOC_SOIL	Units: mg/Kg	Prep Date: 11/29/2012	Run ID: SVOC-5_121129A						
Client ID: ZZZZZ	Batch ID: 66366	TestNo: SW8270C		Analysis Date: 11/29/2012	SeqNo: 2296913						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.033									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66366

Sample ID: MB-66366-SVOC	SampType: MBLK	TestCode: SVOC_SOIL	Units: mg/Kg	Prep Date: 11/29/2012	Run ID: SVOC-5_121129A						
Client ID: ZZZZZ	Batch ID: 66366	TestNo: SW8270C		Analysis Date: 11/29/2012	SeqNo: 2296913						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Pentachlorophenol	ND	0.033
Phenanthrene	ND	0.033
Phenol	ND	0.17
Pyrene	ND	0.033
Pyridine	ND	0.67
1,2,4-Trichlorobenzene	ND	0.17
2,4,5-Trichlorophenol	ND	0.17
2,4,6-Trichlorophenol	ND	0.17

Sample ID: LCS-66366-SVOC	SampType: LCS	TestCode: SVOC_SOIL	Units: mg/Kg	Prep Date: 11/29/2012	Run ID: SVOC-5_121129A						
Client ID: ZZZZZ	Batch ID: 66366	TestNo: SW8270C		Analysis Date: 11/29/2012	SeqNo: 2296947						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Acenaphthene	1.083	0.033	1.667	0	64.9	37	134	0	0	0
4-Chloro-3-methylphenol	2.369	0.33	3.333	0	71.1	29	134	0	0	0
2-Chlorophenol	2.108	0.17	3.333	0	63.3	29	105	0	0	0
1,4-Dichlorobenzene	0.9233	0.17	1.667	0	55.4	26	111	0	0	0
2,4-Dinitrotoluene	1.141	0.033	1.667	0	68.5	46	125	0	0	0
4-Nitrophenol	2.634	0.33	3.333	0	79	12	146	0	0	0
N-Nitrosodi-n-propylamine	0.8813	0.033	1.667	0	52.9	29	109	0	0	0
Pentachlorophenol	1.016	0.033	3.333	0	30.5	10	192	0	0	0
Phenol	2.219	0.17	3.333	0	66.6	27	104	0	0	0
Pyrene	1.443	0.033	1.667	0	86.6	42	148	0	0	0
1,2,4-Trichlorobenzene	0.9217	0.17	1.667	0	55.3	55	106	0	0	0

Sample ID: 12110851-001BMS	SampType: MS	TestCode: SVOC_SOIL	Units: mg/Kg-dry	Prep Date: 11/29/2012	Run ID: SVOC-5_121129A						
Client ID: ZZZZZ	Batch ID: 66366	TestNo: SW8270C		Analysis Date: 11/29/2012	SeqNo: 2297322						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Acenaphthene	1.573	0.037	1.869	0	84.1	24	139	0	0	0
4-Chloro-3-methylphenol	3.47	0.37	3.737	0	92.9	28	121	0	0	0

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66366

Sample ID: 12110851-001BMS	SampType: MS	TestCode: SVOC_SOIL	Units: mg/Kg-dry	Prep Date: 11/29/2012	Run ID: SVOC-5_121129A
Client ID: ZZZZZ	Batch ID: 66366	TestNo: SW8270C		Analysis Date: 11/29/2012	SeqNo: 2297322
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
2-Chlorophenol	3.096	0.19	3.737	0	82.9
1,4-Dichlorobenzene	1.333	0.19	1.869	0	71.3
2,4-Dinitrotoluene	1.524	0.037	1.869	0	81.6
4-Nitrophenol	3.66	0.37	3.737	0	98
N-Nitrosodi-n-propylamine	1.316	0.037	1.869	0	70.4
Pentachlorophenol	1.76	0.037	3.737	0	47.1
Phenol	3.299	0.19	3.737	0	88.3
Pyrene	1.852	0.037	1.869	0.0254	97.7
1,2,4-Trichlorobenzene	1.389	0.19	1.869	0	74.3
<hr/>					
Sample ID: 12110851-001BMSD	SampType: MSD	TestCode: SVOC_SOIL	Units: mg/Kg-dry	Prep Date: 11/29/2012	Run ID: SVOC-5_121129A
Client ID: ZZZZZ	Batch ID: 66366	TestNo: SW8270C		Analysis Date: 11/29/2012	SeqNo: 2297325
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Acenaphthene	1.534	0.037	1.865	0	82.3
4-Chloro-3-methylphenol	3.362	0.37	3.728	0	90.2
2-Chlorophenol	2.93	0.19	3.728	0	78.6
1,4-Dichlorobenzene	1.269	0.19	1.865	0	68.1
2,4-Dinitrotoluene	1.433	0.037	1.865	0	76.9
4-Nitrophenol	3.403	0.37	3.728	0	91.3
N-Nitrosodi-n-propylamine	1.224	0.037	1.865	0	65.7
Pentachlorophenol	1.618	0.037	3.728	0	43.4
Phenol	3.124	0.19	3.728	0	83.8
Pyrene	1.786	0.037	1.865	0.0254	94.4
1,2,4-Trichlorobenzene	1.282	0.19	1.865	0	68.8

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**STAT Analysis Corporation**

CLIENT: Weston Solutions

Work Order: 12110922

Project: Lowenthal Metals Chicago, IL

Test No: SW8082 Matrix: S

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

Sample ID CL10BZ2 XYL2456CLM

MB-66386-PP	57.6	87.9						
LCS-66386-PCB	73.7	85.9						
12110979-001AMS	96.0	55.6						
12110979-001AMSD	56.6	40.4						
12110922-020B	85.9	34.3						
12110922-021B	84.8	32.3						
12110922-022B	68.7	32.3						

Acronym	Surrogate	QC Limits
CL10BZ2	= Decachlorobiphenyl	30-150
XYL2456CLM	= Tetrachloro-m-xylene	30-150

\* Surrogate recovery outside acceptance limits

**STAT Analysis Corporation****PREP BATCH REPORT**

Prep Start Date: 11/30/2012 2:44:16

Prep End Date:

Prep Factor Units:

mL / Kg

Prep Batch **66386** Prep Code: **3550\_PP** Technician: **FAC**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-66386-PP			0.03	0	0	10	333.333	11/30/2012	11/30/2012
LCS-66386-PCB			0.03	0	0	10	333.333	11/30/2012	11/30/2012
LCS-66386-PEST			0.03	0	0	10	333.333	11/30/2012	11/30/2012
12110920-001B	Soil		0.03052	0	0	10	327.654	11/30/2012	11/30/2012
12110922-020B	Soil		0.03063	0	0	10	326.477	11/30/2012	11/30/2012
12110922-021B	Soil		0.03014	0	0	10	331.785	11/30/2012	11/30/2012
12110922-022B	Soil		0.03008	0	0	10	332.447	11/30/2012	11/30/2012
12110941-001A	Soil		0.03016	0	0	10	331.565	11/30/2012	11/30/2012
12110961-002A	Soil		0.01504	0	0	10	664.894	11/30/2012	11/30/2012
12110964-001A	Soil		0.03016	0	0	10	331.565	11/30/2012	11/30/2012
12110974-001A	Soil		0.0303	0	0	10	330.033	11/30/2012	11/30/2012
12110974-002A	Soil		0.03018	0	0	10	331.345	11/30/2012	11/30/2012
12110974-003A	Soil		0.03045	0	0	10	328.407	11/30/2012	11/30/2012
12110974-004A	Soil		0.03055	0	0	10	327.332	11/30/2012	11/30/2012
12110974-005A	Soil		0.03006	0	0	10	332.668	11/30/2012	11/30/2012
12110974-006B	Soil		0.03068	0	0	10	325.945	11/30/2012	11/30/2012
12110974-007A	Soil		0.03022	0	0	10	330.907	11/30/2012	11/30/2012
12110979-001A	Soil		0.03014	0	0	10	331.785	11/30/2012	11/30/2012
12110979-001AMS	Soil		0.03014	0	0	10	331.785	11/30/2012	11/30/2012
12110979-001AMSD	Soil		0.03013	0	0	10	331.895	11/30/2012	11/30/2012
12110922-021BMST	Soil		0.03015	0	0	10	331.675	11/30/2012	11/30/2012
12110922-021BMSDT	Soil		0.03016	0	0	10	331.565	11/30/2012	11/30/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66386

Sample ID: MB-66386-PP	SampType: MBLK	TestCode: PCB_SOIL	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: ZZZZZ	Batch ID: 66386	TestNo: SW8082		Analysis Date: 11/30/2012	SeqNo: 2298287						
<hr/>											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC						
Aroclor 1016	ND	0.080									
Aroclor 1221	ND	0.080									
Aroclor 1232	ND	0.080									
Aroclor 1242	ND	0.080									
Aroclor 1248	ND	0.080									
Aroclor 1254	ND	0.080									
Aroclor 1260	ND	0.080									
<hr/>											
Sample ID: LCS-66386-PCB	SampType: LCS	TestCode: PCB_SOIL	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: ZZZZZ	Batch ID: 66386	TestNo: SW8082		Analysis Date: 11/30/2012	SeqNo: 2298288						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3074	0.080	0.333	0	92.3	30	150	0	0	0	
Aroclor 1260	0.1904	0.080	0.333	0	57.2	30	150	0	0	0	
<hr/>											
Sample ID: 12110979-001AMS	SampType: MS	TestCode: PCB_SOIL	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: ZZZZZ	Batch ID: 66386	TestNo: SW8082		Analysis Date: 11/30/2012	SeqNo: 2298946						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.34	0.084	0.3516	0	96.7	30	150	0	0	0	
Aroclor 1260	0.252	0.084	0.3516	0	71.7	30	150	0	0	0	
<hr/>											
Sample ID: 12110979-001AMSD	SampType: MSD	TestCode: PCB_SOIL	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: ZZZZZ	Batch ID: 66386	TestNo: SW8082		Analysis Date: 11/30/2012	SeqNo: 2298949						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3444	0.085	0.3518	0	97.9	30	150	0.34	1.27	25	
Aroclor 1260	0.252	0.085	0.3518	0	71.6	30	150	0.252	0.0227	25	

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**STAT Analysis Corporation**

CLIENT: Weston Solutions

Work Order: 12110922

Project: Lowenthal Metals Chicago, IL

Test No: SW8081      Matrix: S

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

Sample ID      CL10BZ2    XYL2456CLM

MB-66386-PP	77.8	101						
LCS-66386-PEST	99.0	67.7						
12110922-020B	86.9	40.4						
12110922-021B	103	31.3						
12110922-022B	67.7	36.4						
12110922-021BMST	60.6	33.3						
12110922-021BMSDT	40.4	31.3						

Acronym	Surrogate	QC Limits
CL10BZ2	= Decachlorobiphenyl	30-150
XYL2456CLM	= Tetrachloro-m-xylene	30-150

\* Surrogate recovery outside acceptance limits

**STAT Analysis Corporation****PREP BATCH REPORT**

Prep Start Date: 11/30/2012 2:44:16

Prep End Date:

Prep Factor Units:

mL / Kg

Prep Batch 66386 Prep Code: 3550\_PP Technician: FAC

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-66386-PP			0.03	0	0	10	333.333	11/30/2012	11/30/2012
LCS-66386-PCB			0.03	0	0	10	333.333	11/30/2012	11/30/2012
LCS-66386-PEST			0.03	0	0	10	333.333	11/30/2012	11/30/2012
12110920-001B	Soil		0.03052	0	0	10	327.654	11/30/2012	11/30/2012
12110922-020B	Soil		0.03063	0	0	10	326.477	11/30/2012	11/30/2012
12110922-021B	Soil		0.03014	0	0	10	331.785	11/30/2012	11/30/2012
12110922-022B	Soil		0.03008	0	0	10	332.447	11/30/2012	11/30/2012
12110941-001A	Soil		0.03016	0	0	10	331.565	11/30/2012	11/30/2012
12110961-002A	Soil		0.01504	0	0	10	664.894	11/30/2012	11/30/2012
12110964-001A	Soil		0.03016	0	0	10	331.565	11/30/2012	11/30/2012
12110974-001A	Soil		0.0303	0	0	10	330.033	11/30/2012	11/30/2012
12110974-002A	Soil		0.03018	0	0	10	331.345	11/30/2012	11/30/2012
12110974-003A	Soil		0.03045	0	0	10	328.407	11/30/2012	11/30/2012
12110974-004A	Soil		0.03055	0	0	10	327.332	11/30/2012	11/30/2012
12110974-005A	Soil		0.03006	0	0	10	332.668	11/30/2012	11/30/2012
12110974-006B	Soil		0.03068	0	0	10	325.945	11/30/2012	11/30/2012
12110974-007A	Soil		0.03022	0	0	10	330.907	11/30/2012	11/30/2012
12110979-001A	Soil		0.03014	0	0	10	331.785	11/30/2012	11/30/2012
12110979-001AMS	Soil		0.03014	0	0	10	331.785	11/30/2012	11/30/2012
12110979-001AMSD	Soil		0.03013	0	0	10	331.895	11/30/2012	11/30/2012
12110922-021BMST	Soil		0.03015	0	0	10	331.675	11/30/2012	11/30/2012
12110922-021BMSDT	Soil		0.03016	0	0	10	331.565	11/30/2012	11/30/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66386

Sample ID: MB-66386-PP	SampType: MBLK	TestCode: PEST_SOIL	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: ZZZZZ	Batch ID: 66386	TestNo: SW8081		Analysis Date: 11/30/2012	SeqNo: 2298285						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	ND	0.0016									
4,4'-DDE	ND	0.0016									
4,4'-DDT	ND	0.0016									
Aldrin	ND	0.0016									
alpha-BHC	ND	0.0016									
alpha-Chlordane	ND	0.0016									
beta-BHC	ND	0.0016									
Chlordane	ND	0.016									
delta-BHC	ND	0.0016									
Dieldrin	ND	0.0016									
Endosulfan I	ND	0.0016									
Endosulfan II	ND	0.0016									
Endosulfan sulfate	ND	0.0016									
Endrin	ND	0.0016									
Endrin aldehyde	ND	0.0016									
Endrin ketone	ND	0.0016									
gamma-BHC	ND	0.0016									
gamma-Chlordane	ND	0.0016									
Heptachlor	ND	0.0016									
Heptachlor epoxide	ND	0.0016									
Methoxychlor	ND	0.0016									
Toxaphene	ND	0.033									

Sample ID: LCS-66386-PEST	SampType: LCS	TestCode: PEST_SOIL	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: ZZZZZ	Batch ID: 66386	TestNo: SW8081		Analysis Date: 11/30/2012	SeqNo: 2298289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.016	0.0016	0.0167	0	95.8	30	150	0	0	0	
4,4'-DDE	0.01633	0.0016	0.0167	0	97.8	30	150	0	0	0	
4,4'-DDT	0.01733	0.0016	0.0167	0	104	30	150	0	0	0	
Aldrin	0.01433	0.0016	0.0167	0	85.8	30	150	0	0	0	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66386

Sample ID: LCS-66386-PEST	SampType: LCS	TestCode: PEST_SOIL	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: ZZZZZ	Batch ID: 66386	TestNo: SW8081		Analysis Date: 11/30/2012	SeqNo: 2298289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

alpha-BHC	0.01433	0.0016	0.0167	0	85.8	30	150	0	0	0
alpha-Chlordane	0.015	0.0016	0.0167	0	89.8	30	150	0	0	0
beta-BHC	0.01367	0.0016	0.0167	0	81.8	30	150	0	0	0
delta-BHC	0.01167	0.0016	0.0167	0	69.9	30	150	0	0	0
Dieldrin	0.01533	0.0016	0.0167	0	91.8	30	150	0	0	0
Endosulfan I	0.01567	0.0016	0.0167	0	93.8	30	150	0	0	0
Endosulfan II	0.016	0.0016	0.0167	0	95.8	30	150	0	0	0
Endosulfan sulfate	0.02167	0.0016	0.0167	0	130	30	150	0	0	0
Endrin	0.014	0.0016	0.0167	0	83.8	30	150	0	0	0
Endrin aldehyde	0.01533	0.0016	0.0167	0	91.8	30	150	0	0	0
Endrin ketone	0.01767	0.0016	0.0167	0	106	30	150	0	0	0
gamma-BHC	0.014	0.0016	0.0167	0	83.8	30	150	0	0	0
gamma-Chlordane	0.01533	0.0016	0.0167	0	91.8	30	150	0	0	0
Heptachlor	0.013	0.0016	0.0167	0	77.8	30	150	0	0	0
Heptachlor epoxide	0.01467	0.0016	0.0167	0	87.8	30	150	0	0	0
Methoxychlor	0.01533	0.0016	0.0167	0	91.8	30	150	0	0	0

Sample ID: 12110922-021BMST	SampType: MS	TestCode: PEST_SOIL	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: LM-SB16-(24-36)-11	Batch ID: 66386	TestNo: SW8081		Analysis Date: 11/30/2012	SeqNo: 2298312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.01563	0.0018	0.0191	0	81.8	30	150	0	0	0	
4,4'-DDE	0.01029	0.0018	0.0191	0	53.9	30	150	0	0	0	
4,4'-DDT	0.0183	0.0018	0.0191	0	95.8	30	150	0	0	0	
Aldrin	0.008387	0.0018	0.0191	0	43.9	30	150	0	0	0	
alpha-BHC	0.008768	0.0018	0.0191	0	45.9	30	150	0	0	0	
alpha-Chlordane	0.009912	0.0018	0.0191	0	51.9	30	150	0	0	0	
beta-BHC	0.008768	0.0018	0.0191	0	45.9	30	150	0	0	0	
delta-BHC	0.009912	0.0018	0.0191	0	51.9	30	150	0	0	0	
Dieldrin	0.007625	0.0018	0.0191	0	39.9	30	150	0	0	0	
Endosulfan I	0.01106	0.0018	0.0191	0	57.9	30	150	0	0	0	

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66386

Sample ID: 12110922-021BMST	SampType: MS	TestCode: PEST_SOIL	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: LM-SB16-(24-36)-11	Batch ID: 66386	TestNo: SW8081	Analysis Date: 11/30/2012		SeqNo: 2298312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endosulfan II	0.008006	0.0018	0.0191	0	41.9	30	150	0	0	0	
Endosulfan sulfate	0.01029	0.0018	0.0191	0	53.9	30	150	0	0	0	
Endrin	0.01067	0.0018	0.0191	0	55.9	30	150	0	0	0	
Endrin aldehyde	0.01944	0.0018	0.0191	0	102	30	150	0	0	0	
Endrin ketone	0.02287	0.0018	0.0191	0	120	30	150	0	0	0	
gamma-BHC	0.006481	0.0018	0.0191	0	33.9	30	150	0	0	0	
gamma-Chlordane	0.00915	0.0018	0.0191	0	47.9	30	150	0	0	0	
Heptachlor	0.008006	0.0018	0.0191	0	41.9	30	150	0	0	0	
Heptachlor epoxide	0.00915	0.0018	0.0191	0	47.9	30	150	0	0	0	
Methoxychlor	0.0122	0.0018	0.0191	0	63.9	30	150	0	0	0	
Sample ID: 12110922-021BMSD	SampType: MSD	TestCode: PEST_SOIL	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: LM-SB16-(24-36)-11	Batch ID: 66386	TestNo: SW8081	Analysis Date: 11/30/2012		SeqNo: 2298313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.01448	0.0018	0.01909	0	75.8	30	150	0.01563	7.63	25	
4,4'-DDE	0.01143	0.0018	0.01909	0	59.9	30	150	0.01029	10.5	25	
4,4'-DDT	0.01524	0.0018	0.01909	0	79.8	30	150	0.0183	18.2	25	
Aldrin	0.008766	0.0018	0.01909	0	45.9	30	150	0.008387	4.41	25	
alpha-BHC	0.00686	0.0018	0.01909	0	35.9	30	150	0.008768	24.4	25	
alpha-Chlordane	0.01105	0.0018	0.01909	0	57.9	30	150	0.009912	10.9	25	
beta-BHC	0.00686	0.0018	0.01909	0	35.9	30	150	0.008768	24.4	25	
delta-BHC	0.008384	0.0018	0.01909	0	43.9	30	150	0.009912	16.7	25	
Dieldrin	0.008766	0.0018	0.01909	0	45.9	30	150	0.007625	13.9	25	
Endosulfan I	0.01258	0.0018	0.01909	0	65.9	30	150	0.01106	12.9	25	
Endosulfan II	0.00686	0.0018	0.01909	0	35.9	30	150	0.008006	15.4	25	
Endosulfan sulfate	0.008766	0.0018	0.01909	0	45.9	30	150	0.01029	16.0	25	
Endrin	0.01067	0.0018	0.01909	0	55.9	30	150	0.01067	0.0332	25	
Endrin aldehyde	0.02058	0.0018	0.01909	0	108	30	150	0.01944	5.68	25	
Endrin ketone	0.02706	0.0018	0.01909	0	142	30	150	0.02287	16.8	25	
gamma-BHC	0.008003	0.0018	0.01909	0	41.9	30	150	0.006481	21.0	25	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66386

Sample ID: 12110922-021BMSD	SampType: MSD	TestCode: PEST_SOIL	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: GC-ECD_121130A						
Client ID: LM-SB16-(24-36)-11	Batch ID: 66386	TestNo: SW8081	Analysis Date: 11/30/2012		SeqNo: 2298313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
gamma-Chlordane	0.009909	0.0018	0.01909	0	51.9	30	150	0.00915	7.97	25	
Heptachlor	0.006479	0.0018	0.01909	0	33.9	30	150	0.008006	21.1	25	
Heptachlor epoxide	0.007622	0.0018	0.01909	0	39.9	30	150	0.00915	18.2	25	
Methoxychlor	0.0141	0.0018	0.01909	0	73.9	30	150	0.0122	14.5	25	

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**STAT Analysis Corporation****PREP BATCH REPORT**

Prep Start Date: 11/30/2012 11:30:0

Prep End Date: 11/30/2012 2:00:00

Prep Factor Units:

mL / g

Prep Batch **66384** Prep Code: **M\_S\_PREP** Technician: **MDDT**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS1 11/30/12			1	0	0	50	50.000	11/30/2012	11/30/2012
ILCSS1 11/30/12			1	0	0	50	50.000	11/30/2012	11/30/2012
12110899-001A	Product		1.035	0	0	50	48.309	11/30/2012	11/30/2012
12110900-001A	Product		1.032	0	0	50	48.450	11/30/2012	11/30/2012
12110922-001A	Soil		0.906	0	0	50	55.188	11/30/2012	11/30/2012
12110922-021B	Soil		1.103	0	0	50	45.331	11/30/2012	11/30/2012
12110922-021BMS	Soil		1.108	0	0	50	45.126	11/30/2012	11/30/2012
12110922-021BMSD	Soil		1.103	0	0	50	45.331	11/30/2012	11/30/2012
12110964-001A	Soil		0.841	0	0	50	59.453	11/30/2012	11/30/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: 66384

Sample ID: IMBS1 11/30/12	SampType: MBLK	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: ICPMS_121130A
Client ID: ZZZZZ	Batch ID: 66384	TestNo: SW6020		Analysis Date: 11/30/2012	SeqNo: 2298185
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	ND	0.50			
Barium	ND	0.50			
Cadmium	ND	0.25			
Chromium	0.2275	0.50			J
Copper	0.3685	1.2			J
Lead	0.183	0.25			J
Manganese	0.2635	0.50			J
Silver	0.043	0.50			J
Zinc	ND	2.5			
Sample ID: IMBS1 11/30/12	SampType: MBLK	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: ICPMS_121203B
Client ID: ZZZZZ	Batch ID: 66384	TestNo: SW6020		Analysis Date: 12/3/2012	SeqNo: 2298643
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Selenium	ND	0.50			
Sample ID: ILCSS1 11/30/12	SampType: LCS	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: ICPMS_121130A
Client ID: ZZZZZ	Batch ID: 66384	TestNo: SW6020		Analysis Date: 11/30/2012	SeqNo: 2298187
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	28.51	0.50	25	0	114
Barium	29.34	0.50	25	0	117
Copper	28.96	1.2	25	0.3685	114
Lead	28.02	0.25	25	0.183	111
Manganese	30.21	0.50	25	0.2635	120
Zinc	26.54	2.5	25	0	106
Sample ID: ILCSS1 11/30/12	SampType: LCS	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: ICPMS_121203B
Client ID: ZZZZZ	Batch ID: 66384	TestNo: SW6020		Analysis Date: 12/3/2012	SeqNo: 2298644
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66384

Sample ID: ILCSS1 11/30/12	SampType: LCS	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 11/30/2012			Run ID: ICPMS_121203B				
Client ID: ZZZZZ	Batch ID: 66384	TestNo: SW6020		Analysis Date: 12/3/2012			SeqNo: 2298644				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	29.36	0.50	25	0	117	80	120	0	0		
Selenium	25.88	0.50	25	0	104	80	120	0	0		
Silver	11.22	0.50	10	0.039	112	80	120	0	0		
Sample ID: 12110922-021BMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012			Run ID: ICPMS_121130A				
Client ID: LM-SB16-(24-36)-11	Batch ID: 66384	TestNo: SW6020		Analysis Date: 11/30/2012			SeqNo: 2298192				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	33.52	1.0	25.93	14.57	73.1	75	125	0	0		S
Barium	205.5	1.0	25.93	231.6	-101	75	125	0	0		S
Cadmium	50.8	0.52	25.93	24.91	99.8	75	125	0	0		
Chromium	32.89	1.0	25.93	13.58	74.4	75	125	0	0		S
Manganese	213.6	1.0	25.93	188.9	95.1	75	125	0	0		
Silver	32.36	1.0	10.37	1.748	295	75	125	0	0		S
Sample ID: 12110922-021BMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012			Run ID: ICPMS_121203B				
Client ID: LM-SB16-(24-36)-11	Batch ID: 66384	TestNo: SW6020		Analysis Date: 12/3/2012			SeqNo: 2298646				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	4652	130	25.93	2141	9680	75	125	0	0		S
Lead	8029	26	25.93	7414	2370	75	125	0	0		S
Selenium	45.73	52	25.93	50.18	-17.2	75	125	0	0		JS
Zinc	14700	260	25.93	13640	4080	75	125	0	0		S
Sample ID: 12110922-021BMSD	SampType: MSD	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012			Run ID: ICPMS_121130A				
Client ID: LM-SB16-(24-36)-11	Batch ID: 66384	TestNo: SW6020		Analysis Date: 11/30/2012			SeqNo: 2298193				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	28.42	1.0	26.05	14.57	53.2	75	125	33.52	16.5	20	S
Barium	152.1	1.0	26.05	231.6	-305	75	125	205.5	29.8	20	SR
Cadmium	37.85	0.52	26.05	24.91	49.7	75	125	50.8	29.2	20	SR

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded  
B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66384

Sample ID: 12110922-021BMSD	SampType: MSD	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: ICPMS_121130A						
Client ID: LM-SB16-(24-36)-11	Batch ID: 66384	TestNo: SW6020	Analysis Date: 11/30/2012		SeqNo: 2298193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	26.29	1.0	26.05	13.58	48.8	75	125	32.89	22.3	20	SR
Manganese	188.7	1.0	26.05	188.9	-1	75	125	213.6	12.4	20	S
Silver	10.14	1.0	10.42	1.748	80.5	75	125	32.36	105	20	R
Sample ID: 12110922-021BMSD	SampType: MSD	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: ICPMS_121203B						
Client ID: LM-SB16-(24-36)-11	Batch ID: 66384	TestNo: SW6020	Analysis Date: 12/3/2012		SeqNo: 2298649						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	2367	130	26.05	2141	866	75	125	4652	65.1	20	SR
Lead	4766	26	26.05	7414	-10200	75	125	8029	51.0	20	SR
Selenium	31.37	52	26.05	50.18	-72.2	75	125	45.73	0	20	JS
Zinc	11760	260	26.05	13640	-7220	75	125	14700	22.2	20	SR

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
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S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

Prep Start Date: 11/30/2012 1:45:00

Prep End Date: 11/30/2012 4:30:00

Prep Factor Units:

mL / g

Prep Batch 66385 Prep Code: M\_S\_PREP Technician: MDDT

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS2 11/30/12			1	0	0	50	50.000	11/30/2012	11/30/2012
ILCSS2 11/30/12			1	0	0	50	50.000	11/30/2012	11/30/2012
12110922-002A	Soil		0.909	0	0	50	55.006	11/30/2012	11/30/2012
12110922-003A	Soil		0.939	0	0	50	53.248	11/30/2012	11/30/2012
12110922-004A	Soil		0.928	0	0	50	53.879	11/30/2012	11/30/2012
12110922-005A	Soil		1.179	0	0	50	42.409	11/30/2012	11/30/2012
12110922-006A	Soil		0.906	0	0	50	55.188	11/30/2012	11/30/2012
12110922-006AMS	Soil		0.902	0	0	50	55.432	11/30/2012	11/30/2012
12110922-006AMSD	Soil		0.905	0	0	50	55.249	11/30/2012	11/30/2012
12110922-007A	Soil		0.932	0	0	50	53.648	11/30/2012	11/30/2012
12110922-008A	Soil		0.924	0	0	50	54.113	11/30/2012	11/30/2012
12110922-009A	Soil		1.006	0	0	50	49.702	11/30/2012	11/30/2012
12110922-010A	Soil		1.018	0	0	50	49.116	11/30/2012	11/30/2012
12110922-011A	Soil		1.028	0	0	50	48.638	11/30/2012	11/30/2012
12110922-012A	Soil		0.96	0	0	50	52.083	11/30/2012	11/30/2012
12110922-013A	Soil		1.065	0	0	50	46.948	11/30/2012	11/30/2012
12110922-014A	Soil		1.05	0	0	50	47.619	11/30/2012	11/30/2012
12110922-015A	Soil		1.152	0	0	50	43.403	11/30/2012	11/30/2012
12110922-016A	Soil		0.906	0	0	50	55.188	11/30/2012	11/30/2012
12110922-017A	Soil		0.924	0	0	50	54.113	11/30/2012	11/30/2012
12110922-018A	Soil		0.982	0	0	50	50.916	11/30/2012	11/30/2012
12110922-019A	Soil		0.506	0	0	50	98.814	11/30/2012	11/30/2012
12110922-020B	Soil		0.976	0	0	50	51.230	11/30/2012	11/30/2012
12110922-022B	Soil		1.121	0	0	50	44.603	11/30/2012	11/30/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: 66385

Sample ID: IMBS2 11/30/12	SampType: MBLK	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: ICPMS-2_121203A						
Client ID: ZZZZZ	Batch ID: 66385	TestNo: SW6020		Analysis Date: 12/3/2012	SeqNo: 2298865						
<b>Analyte</b> <b>Result</b> <b>PQL</b> <b>SPK value</b> <b>SPK Ref Val</b> <b>%REC</b> <b>LowLimit</b> <b>HighLimit</b> <b>RPD Ref Val</b> <b>%RPD</b> <b>RPDLimit</b> <b>Qual</b>											
Arsenic	ND	0.50									
Barium	ND	0.50									
Cadmium	ND	0.25									
Chromium	ND	0.50									
Copper	ND	1.2									
Lead	0.118	0.25									J
Manganese	ND	0.50									
Selenium	ND	0.50									
Silver	0.1665	0.50									J
Zinc	ND	2.5									
Sample ID: ILCSS2 11/30/12	SampType: LCS	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: ICPMS-2_121203A						
Client ID: ZZZZZ	Batch ID: 66385	TestNo: SW6020		Analysis Date: 12/3/2012	SeqNo: 2298866						
<b>Analyte</b> <b>Result</b> <b>PQL</b> <b>SPK value</b> <b>SPK Ref Val</b> <b>%REC</b> <b>LowLimit</b> <b>HighLimit</b> <b>RPD Ref Val</b> <b>%RPD</b> <b>RPDLimit</b> <b>Qual</b>											
Arsenic	25.55	0.50	25	0	102	80	120	0	0		
Barium	27.88	0.50	25	0	112	80	120	0	0		
Cadmium	27.17	0.25	25	0	109	80	120	0	0		
Chromium	26.81	0.50	25	0	107	80	120	0	0		
Copper	26	1.2	25	0	104	80	120	0	0		
Lead	26.54	0.25	25	0.118	106	80	120	0	0		
Manganese	26.92	0.50	25	0	108	80	120	0	0		
Selenium	23.56	0.50	25	0	94.2	80	120	0	0		
Silver	10.55	0.50	10	0.1665	104	80	120	0	0		
Zinc	24.22	2.5	25	0	96.9	80	120	0	0		
Sample ID: 12110922-006AMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: ICPMS-2_121203A						
Client ID: LM-SB23-(6-12)-112	Batch ID: 66385	TestNo: SW6020		Analysis Date: 12/3/2012	SeqNo: 2298874						
<b>Analyte</b> <b>Result</b> <b>PQL</b> <b>SPK value</b> <b>SPK Ref Val</b> <b>%REC</b> <b>LowLimit</b> <b>HighLimit</b> <b>RPD Ref Val</b> <b>%RPD</b> <b>RPDLimit</b> <b>Qual</b>											
Arsenic	27.75	1.3	31.28	8.284	62.2	75	125	0	0		S

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HIT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66385

Sample ID: 12110922-006AMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: ICPMS-2_121203A						
Client ID: LM-SB23-(6-12)-112	Batch ID: 66385	TestNo: SW6020	Analysis Date: 12/3/2012		SeqNo: 2298874						
<b>Analyte</b>											
Barium	Result	PQL	SPK value	SPK Ref Val	%REC						
1192	1.3	31.28	1053	447	75	125	0	0	S		
Cadmium	37.89	0.63	31.28	14.39	75.1	75	125	0	0		
Chromium	36.79	1.3	31.28	58.13	-68.2	75	125	0	0	S	
Copper	2286	3.1	31.28	1515	2460	75	125	0	0	SE	
Lead	3348	0.63	31.28	4556	-3860	75	125	0	0	S	
Manganese	191.6	1.3	31.28	336.3	-463	75	125	0	0	S	
Selenium	18.04	1.3	31.28	1.121	54.1	75	125	0	0	S	
Silver	9.266	1.3	12.51	1.519	61.9	75	125	0	0	S	
Zinc	5005	6.3	31.28	3776	3930	75	125	0	0	SE	
Sample ID: 12110922-006AMSD	SampType: MSD	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: ICPMS-2_121203A						
Client ID: LM-SB23-(6-12)-112	Batch ID: 66385	TestNo: SW6020	Analysis Date: 12/3/2012		SeqNo: 2298875						
<b>Analyte</b>											
Arsenic	Result	PQL	SPK value	SPK Ref Val	%REC						
27.08	1.2	31.18	8.284	60.3	75	125	27.75	2.43	20	S	
Barium	976.5	1.2	31.18	1053	-244	75	125	1192	19.9	20	S
Cadmium	34.34	0.62	31.18	14.39	64	75	125	37.89	9.83	20	S
Chromium	37.56	1.2	31.18	58.13	-66	75	125	36.79	2.05	20	S
Copper	1205	3.1	31.18	1515	-997	75	125	2286	62.0	20	SR
Lead	3544	0.62	31.18	4556	-3250	75	125	3348	5.69	20	S
Manganese	219.7	1.2	31.18	336.3	-374	75	125	191.6	13.7	20	S
Selenium	20.3	1.2	31.18	1.121	61.5	75	125	18.04	11.8	20	S
Silver	9.428	1.2	12.47	1.519	63.4	75	125	9.266	1.74	20	S
Zinc	3360	6.2	31.18	3776	-1330	75	125	5005	39.3	20	SRE

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range	
* - Non Accredited Parameter	H/HT - Holding Time Exceeded		

## STAT Analysis Corporation

## PREP BATCH REPORT

Prep Start Date: 12/5/2012 10:00:00

Prep End Date: 12/5/2012 1:10:00 P

Prep Factor Units:

mL / g

Prep Batch 66455 Prep Code: M\_S\_PREP Technician: MDDT

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS3 12/4/12			1	0	0	50	50.000	12/4/2012	12/4/2012
ILCSS3 12/4/12			1	0	0	50	50.000	12/4/2012	12/4/2012
12110922-006A	Soil	0.754		0	0	50	66.313	12/4/2012	12/4/2012
12110922-006AMS	Soil	0.751		0	0	50	66.578	12/4/2012	12/4/2012
12110922-006AMSD	Soil	0.752		0	0	50	66.489	12/4/2012	12/4/2012
12111006-002B	Soil	1.039		0	0	50	48.123	12/4/2012	12/4/2012
12111006-002BMS	Soil	1.045		0	0	50	47.847	12/4/2012	12/4/2012
12111006-002BMSD	Soil	1.04		0	0	50	48.077	12/4/2012	12/4/2012
12111004-001B	Soil	0.914		0	0	50	54.705	12/4/2012	12/4/2012
12111004-002B	Soil	0.997		0	0	50	50.150	12/4/2012	12/4/2012
12111004-002BMS	Soil	0.984		0	0	50	50.813	12/4/2012	12/4/2012
12111004-002BMSD	Soil	0.997		0	0	50	50.150	12/4/2012	12/4/2012
12111004-012B	Soil	0.958		0	0	50	52.192	12/4/2012	12/4/2012
12111004-013B	Soil	1.143		0	0	50	43.745	12/4/2012	12/4/2012
12111004-019B	Soil	0.964		0	0	50	51.867	12/4/2012	12/4/2012
12111004-021B	Soil	0.949		0	0	50	52.687	12/4/2012	12/4/2012
12111004-025B	Soil	1.037		0	0	50	48.216	12/4/2012	12/4/2012
12111004-027B	Soil	0.912		0	0	50	54.825	12/4/2012	12/4/2012
12111004-030B	Soil	0.944		0	0	50	52.966	12/4/2012	12/4/2012
12111004-031B	Soil	0.978		0	0	50	51.125	12/4/2012	12/4/2012
12111004-036B	Soil	0.909		0	0	50	55.006	12/4/2012	12/4/2012
12111004-038B	Soil	1.102		0	0	50	45.372	12/4/2012	12/4/2012
12120021-001A	Soil	0.904		0	0	50	55.310	12/4/2012	12/4/2012
12120021-004A	Soil	1.001		0	0	50	49.950	12/4/2012	12/4/2012
12111004-042B	Soil	0.935		0	0	50	53.476	12/5/2012	12/5/2012

**STAT Analysis Corporation****PREP BATCH REPORT**

Prep Start Date: 12/5/2012 10:00:00

Prep End Date: 12/5/2012 1:10:00 P

Prep Factor Units:

mL / g

Prep Batch **66455** Prep Code: **M\_S\_PREP** Technician: **MDDT**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
12111004-043B	Soil		0.957	0	0	50	52.247	12/5/2012	12/5/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66455

Sample ID: IMBS3 12/4/12	SampType: MBLK	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 12/4/2012	Run ID: ICPMS_121204B
Client ID: ZZZZZ	Batch ID: 66455	TestNo: SW6020		Analysis Date: 12/4/2012	SeqNo: 2300057
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	ND	0.50			
Barium	0.157	0.50			J
Cadmium	ND	0.25			
Chromium	ND	0.50			
Copper	ND	1.2			
Lead	0.12	0.25			J
Manganese	ND	0.50			
Selenium	ND	0.50			
Silver	0.04	0.50			J
Zinc	ND	2.5			
Sample ID: ILCSS3 12/4/12	SampType: LCS	TestCode: M_ICPMS_S	Units: mg/Kg	Prep Date: 12/4/2012	Run ID: ICPMS_121204B
Client ID: ZZZZZ	Batch ID: 66455	TestNo: SW6020		Analysis Date: 12/4/2012	SeqNo: 2300060
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	26.62	0.50	25	0	106
Barium	27.72	0.50	25	0.157	110
Cadmium	26.24	0.25	25	0	105
Chromium	28.78	0.50	25	0	115
Copper	28.42	1.2	25	0	114
Lead	26.66	0.25	25	0.12	106
Manganese	28.95	0.50	25	0	116
Selenium	25.4	0.50	25	0	102
Silver	10.49	0.50	10	0.04	104
Zinc	25.4	2.5	25	0	102
Sample ID: 12111004-002BMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A
Client ID: ZZZZZ	Batch ID: 66455	TestNo: SW6020		Analysis Date: 12/5/2012	SeqNo: 2300465
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	32.17	1.1	26.7	2.84	110
<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits * - Non Accredited Parameter		S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits H/HT - Holding Time Exceeded		B - Analyte detected in the associated Method Blank E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66455

Sample ID: 12111004-002BMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A						
Client ID: ZZZZZ	Batch ID: 66455	TestNo: SW6020	Analysis Date: 12/5/2012		SeqNo: 2300465						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	34.62	1.1	26.7	3.76	116	75	125	0	0		
Cadmium	29.5	0.53	26.7	0	110	75	125	0	0		
Chromium	34.69	1.1	26.7	3.017	119	75	125	0	0		
Copper	32.33	2.7	26.7	2.106	113	75	125	0	0		
Lead	33.38	0.53	26.7	3.364	112	75	125	0	0		
Manganese	163.8	1.1	26.7	136.3	103	75	125	0	0		
Selenium	29.39	1.1	26.7	0	110	75	125	0	0		
Silver	11.48	1.1	10.68	0.04533	107	75	125	0	0		
Zinc	41.18	5.3	26.7	10.81	114	75	125	0	0		
Sample ID: 12111006-002BMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A						
Client ID: ZZZZZ	Batch ID: 66455	TestNo: SW6020	Analysis Date: 12/5/2012		SeqNo: 2300468						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	33.98	1.2	29.25	3.55	104	75	125	0	0		
Barium	49.27	1.2	29.25	16.91	111	75	125	0	0		
Cadmium	29.54	0.58	29.25	0.1247	101	75	125	0	0		
Chromium	39.65	1.2	29.25	8.625	106	75	125	0	0		
Lead	40.55	0.58	29.25	8.372	110	75	125	0	0		
Selenium	32.06	1.2	29.25	0.7583	107	75	125	0	0		
Silver	11.31	1.2	11.7	0.07118	96	75	125	0	0		
Sample ID: 12110922-006AMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A						
Client ID: LM-SB23-(6-12)-112	Batch ID: 66455	TestNo: SW6020	Analysis Date: 12/5/2012		SeqNo: 2300473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.83	1.5	37.57	12.01	103	75	125	0	0		
Barium	1544	1.5	37.57	1234	825	75	125	0	0		S
Cadmium	57.12	0.75	37.57	17.5	105	75	125	0	0		
Chromium	76.12	1.5	37.57	28.77	126	75	125	0	0		S
Lead	6242	0.75	37.57	5685	1480	75	125	0	0		S

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66455

Sample ID: 12110922-006AMS	SampType: MS	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A						
Client ID: LM-SB23-(6-12)-112	Batch ID: 66455	TestNo: SW6020	Analysis Date: 12/5/2012		SeqNo: 2300473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	292.2	1.5	37.57	293.4	-3.08	75	125	0	0	0	S
Selenium	41.01	1.5	37.57	2.093	104	75	125	0	0	0	
Silver	17.14	1.5	15.03	1.577	104	75	125	0	0	0	
Sample ID: 12111004-002BMSD	SampType: MSD	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A						
Client ID: ZZZZZ	Batch ID: 66455	TestNo: SW6020	Analysis Date: 12/5/2012		SeqNo: 2300466						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	32.28	1.1	26.36	2.84	112	75	125	32.17	0.334	20	
Barium	34.57	1.1	26.36	3.76	117	75	125	34.62	0.147	20	
Cadmium	29.45	0.53	26.36	0	112	75	125	29.5	0.178	20	
Chromium	34.82	1.1	26.36	3.017	121	75	125	34.69	0.367	20	
Copper	32.02	2.6	26.36	2.106	113	75	125	32.33	0.983	20	
Lead	33.1	0.53	26.36	3.364	113	75	125	33.38	0.818	20	
Manganese	185.4	1.1	26.36	136.3	187	75	125	163.8	12.4	20	S
Selenium	29.57	1.1	26.36	0	112	75	125	29.39	0.614	20	
Silver	11.42	1.1	10.54	0.04533	108	75	125	11.48	0.478	20	
Zinc	39.95	5.3	26.36	10.81	111	75	125	41.18	3.04	20	
Sample ID: 12111006-002BMSD	SampType: MSD	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A						
Client ID: ZZZZZ	Batch ID: 66455	TestNo: SW6020	Analysis Date: 12/5/2012		SeqNo: 2300471						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	35.68	1.2	29.39	3.55	109	75	125	33.98	4.87	20	
Barium	51.5	1.2	29.39	16.91	118	75	125	49.27	4.41	20	
Cadmium	31.11	0.59	29.39	0.1247	105	75	125	29.54	5.18	20	
Chromium	41.24	1.2	29.39	8.625	111	75	125	39.65	3.93	20	
Lead	44.13	0.59	29.39	8.372	122	75	125	40.55	8.46	20	
Selenium	32.64	1.2	29.39	0.7583	108	75	125	32.06	1.78	20	
Silver	11.92	1.2	11.75	0.07118	101	75	125	11.31	5.28	20	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 R - RPD outside accepted recovery limits  
 H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
 E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66455

Sample ID: 12110922-006AMSD	SampType: MSD	TestCode: M_ICPMS_S	Units: mg/Kg-dry	Prep Date: 12/4/2012	Run ID: ICPMS_121205A						
Client ID: LM-SB23-(6-12)-112	Batch ID: 66455	TestNo: SW6020	Analysis Date: 12/5/2012		SeqNo: 2300474						
<b>Analyte</b>											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.73	1.5	37.52	12.01	103	75	125	50.83	0.192	20	
Barium	1308	1.5	37.52	1234	197	75	125	1544	16.6	20	S
Cadmium	56.47	0.75	37.52	17.5	104	75	125	57.12	1.15	20	
Chromium	73.52	1.5	37.52	28.77	119	75	125	76.12	3.48	20	
Lead	6391	0.75	37.52	5685	1880	75	125	6242	2.35	20	S
Manganese	356.8	1.5	37.52	293.4	169	75	125	292.2	19.9	20	S
Selenium	38.62	1.5	37.52	2.093	97.3	75	125	41.01	6.02	20	
Silver	17	1.5	15.01	1.577	103	75	125	17.14	0.837	20	

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits * - Non Accredited Parameter	S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits H/HT - Holding Time Exceeded	B - Analyte detected in the associated Method Blank E - Value above quantitation range
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**STAT Analysis Corporation****PREP BATCH REPORT**

Prep Start Date: 11/29/2012 1:30:00

Prep End Date: 11/29/2012 3:50:00

Prep Factor Units:

mL / mL

Prep Batch 66370 Prep Code: M\_W\_PREP Technician: RW

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW1 11/29/12			50	0	0	50	1.000	11/29/2012	11/29/2012
ILCSW1 11/29/12			50	0	0	50	1.000	11/29/2012	11/29/2012
IMBTA1 11/28/12			50	0	0	50	1.000	11/29/2012	11/29/2012
12110802-023A	Solid		50	0	0	50	1.000	11/29/2012	11/29/2012
12110890-001A	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110921-004A	Liquid		50	0	0	50	1.000	11/29/2012	11/29/2012
12110921-006A	Sludge		50	0	0	50	1.000	11/29/2012	11/29/2012
12110921-007A	Sludge		50	0	0	50	1.000	11/29/2012	11/29/2012
12110922-020B	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110922-021B	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110922-022B	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110929-001A	Solid		50	0	0	50	1.000	11/29/2012	11/29/2012
12110941-001A	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110941-001AMS	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110941-001AMSD	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110946-001A	Liquid		50	0	0	50	1.000	11/29/2012	11/29/2012
IMBTB 11/28/12			50	0	0	50	1.000	11/29/2012	11/29/2012
12110920-001B	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110920-001BMS	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
IMBSPLP 11/28/12			50	0	0	50	1.000	11/29/2012	11/29/2012
12110556-008B	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012
12110556-008BMS	Soil		50	0	0	50	1.000	11/29/2012	11/29/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66370

Sample ID: IMBTA1 11/28/12	SampType: MBLK	TestCode: M_ICPMS_T+ Units: mg/L			Prep Date: 11/29/2012			Run ID: ICPMS_121129A			
Client ID: ZZZZZ	Batch ID: 66370	TestNo: SW1311/6020			Analysis Date: 11/29/2012			SeqNo: 2297254			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00465	0.010									J
Barium	0.00569	0.50									J
Cadmium	0.00127	0.0050									J
Chromium	0.00679	0.010									J
Copper	0.02849	0.10									J
Lead	0.0028	0.0050									J
Manganese	0.00067	0.010									J
Selenium	0.00881	0.010									J
Silver	0.00163	0.010									J
Zinc	ND	0.50									
Sample ID: 12110941-001AMS	SampType: MS	TestCode: M_ICPMS_T+ Units: mg/L			Prep Date: 11/29/2012			Run ID: ICPMS_121129A			
Client ID: ZZZZZ	Batch ID: 66370	TestNo: SW1311/6020			Analysis Date: 11/29/2012			SeqNo: 2297265			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5191	0.010	0.5	0	104	75	125	0	0		
Barium	1.255	0.50	0.5	0.7213	107	75	125	0	0		
Cadmium	0.5014	0.0050	0.5	0.00269	99.7	75	125	0	0		
Chromium	0.4962	0.010	0.5	0.00703	97.8	75	125	0	0		
Copper	0.5114	0.10	0.5	0.02899	96.5	75	125	0	0		
Lead	0.5256	0.0050	0.5	0.00385	104	75	125	0	0		
Manganese	1.722	0.010	0.5	1.244	95.6	75	125	0	0		
Selenium	0.494	0.010	0.5	0	98.8	75	125	0	0		
Silver	0.1966	0.010	0.2	0.00146	97.6	75	125	0	0		
Zinc	0.4874	0.50	0.5	0.03892	89.7	75	125	0	0		J
Sample ID: 12110941-001AMSD	SampType: MSD	TestCode: M_ICPMS_T+ Units: mg/L			Prep Date: 11/29/2012			Run ID: ICPMS_121129A			
Client ID: ZZZZZ	Batch ID: 66370	TestNo: SW1311/6020			Analysis Date: 11/29/2012			SeqNo: 2297266			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5302	0.010	0.5	0	106	75	125	0.5191	2.12	20	
<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit			S - Spike Recovery outside accepted recovery limits			B - Analyte detected in the associated Method Blank				
	J - Analyte detected below quantitation limits			R - RPD outside accepted recovery limits			E - Value above quantitation range				
	* - Non Accredited Parameter			H/HT - Holding Time Exceeded							

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: 66370

Sample ID: 12110941-001AMSD	SampType: MSD	TestCode: M_ICPMS_T+	Units: mg/L	Prep Date: 11/29/2012	Run ID: ICPMS_121129A						
Client ID: ZZZZZ	Batch ID: 66370	TestNo: SW1311/6020		Analysis Date: 11/29/2012	SeqNo: 2297266						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.266	0.50	0.5	0.7213	109	75	125	1.255	0.873	20	
Cadmium	0.5127	0.0050	0.5	0.00269	102	75	125	0.5014	2.23	20	
Chromium	0.5106	0.010	0.5	0.00703	101	75	125	0.4962	2.86	20	
Copper	0.5326	0.10	0.5	0.02899	101	75	125	0.5114	4.06	20	
Lead	0.5365	0.0050	0.5	0.00385	107	75	125	0.5256	2.05	20	
Manganese	1.765	0.010	0.5	1.244	104	75	125	1.722	2.47	20	
Selenium	0.5057	0.010	0.5	0	101	75	125	0.494	2.34	20	
Silver	0.1986	0.010	0.2	0.00146	98.6	75	125	0.1966	1.01	20	
Zinc	0.5009	0.50	0.5	0.03892	92.4	75	125	0.4874	2.73	20	
Sample ID: IMBW1 11/29/12	SampType: MBLK	TestCode: M_ICPMS_W	Units: mg/L	Prep Date: 11/29/2012	Run ID: ICPMS_121129A						
Client ID: ZZZZZ	Batch ID: 66370	TestNo: SW6020		Analysis Date: 11/29/2012	SeqNo: 2297252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.0040									J
Barium	ND	0.0040									
Cadmium	ND	0.0020									
Chromium	0.00208	0.0040									
Copper	ND	0.010									
Lead	0.00064	0.0020									J
Manganese	ND	0.0040									
Selenium	ND	0.0040									
Silver	0.00062	0.0040									J
Zinc	ND	0.020									
Sample ID: ILCSW1 11/29/12	SampType: LCS	TestCode: M_ICPMS_W	Units: mg/L	Prep Date: 11/29/2012	Run ID: ICPMS_121129A						
Client ID: ZZZZZ	Batch ID: 66370	TestNo: SW6020		Analysis Date: 11/29/2012	SeqNo: 2297253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5221	0.0040	0.5	0	104	80	120	0	0		
Barium	0.5287	0.0040	0.5	0	106	80	120	0	0		

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: 66370

Sample ID: ILCSW1 11/29/12	SampType: LCS	TestCode: M_ICPMS_W	Units: mg/L	Prep Date: 11/29/2012			Run ID: ICPMS_121129A				
Client ID: ZZZZZ	Batch ID: 66370	TestNo: SW6020		Analysis Date: 11/29/2012			SeqNo: 2297253				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.5322	0.0020	0.5	0	106	80	120	0	0		
Chromium	0.5344	0.0040	0.5	0.00208	106	80	120	0	0		
Copper	0.5451	0.010	0.5	0	109	80	120	0	0		
Lead	0.5237	0.0020	0.5	0.00064	105	80	120	0	0		
Manganese	0.524	0.0040	0.5	0	105	80	120	0	0		
Selenium	0.5172	0.0040	0.5	0	103	80	120	0	0		
Silver	0.2105	0.0040	0.2	0.00062	105	80	120	0	0		
Zinc	0.499	0.020	0.5	0	99.8	80	120	0	0		

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

Prep Start Date: 11/30/2012 6:41:00

Prep End Date: 11/30/2012 7:20:00

Prep Factor Units:

mL / g

Prep Batch 66395 Prep Code: M\_HG\_S\_PRE Technician: LB

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS2 11/30/12			0.301	0	0	30	99.668	11/30/2012	11/30/2012
HGLCSS2 11/30/12			0.302	0	0	30	99.338	11/30/2012	11/30/2012
12110964-001A	Soil		0.352	0	0	30	85.227	11/30/2012	11/30/2012
12110974-001A	Soil		0.323	0	0	30	92.879	11/30/2012	11/30/2012
12110974-002A	Soil		0.381	0	0	30	78.740	11/30/2012	11/30/2012
12110974-003A	Soil		0.33	0	0	30	90.909	11/30/2012	11/30/2012
12110974-004A	Soil		0.343	0	0	30	87.464	11/30/2012	11/30/2012
12110974-005A	Soil		0.324	0	0	30	92.593	11/30/2012	11/30/2012
12110974-006B	Soil		0.3	0	0	30	100.000	11/30/2012	11/30/2012
12110974-007A	Soil		0.308	0	0	30	97.403	11/30/2012	11/30/2012
12110922-001A	Soil		0.31	0	0	30	96.774	11/30/2012	11/30/2012
12110922-002A	Soil		0.356	0	0	30	84.270	11/30/2012	11/30/2012
12110922-003A	Soil		0.319	0	0	30	94.044	11/30/2012	11/30/2012
12110922-004A	Soil		0.305	0	0	30	98.361	11/30/2012	11/30/2012
12110922-005A	Soil		0.355	0	0	30	84.507	11/30/2012	11/30/2012
12110922-006A	Soil		0.35	0	0	30	85.714	11/30/2012	11/30/2012
12110922-007A	Soil		0.336	0	0	30	89.286	11/30/2012	11/30/2012
12110922-008A	Soil		0.349	0	0	30	85.960	11/30/2012	11/30/2012
12110922-009A	Soil		0.301	0	0	30	99.668	11/30/2012	11/30/2012
12110922-009AMS	Soil		0.307	0	0	30	97.720	11/30/2012	11/30/2012
12110922-009AMSD	Soil		0.303	0	0	30	99.010	11/30/2012	11/30/2012
12110922-010A	Soil		0.34	0	0	30	88.235	11/30/2012	11/30/2012
12110922-011A	Soil		0.328	0	0	30	91.463	11/30/2012	11/30/2012
12110922-012A	Soil		0.305	0	0	30	98.361	11/30/2012	11/30/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66395

Sample ID: HGMBS2 11/30/12	SampType: MBLK	TestCode: M_HG_SOLID	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: CETAC_121203A						
Client ID: ZZZZZ	Batch ID: 66395	TestNo: SW7471A		Analysis Date: 12/3/2012	SeqNo: 2298533						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00299	0.020									J
Sample ID: HGLCSS2 11/30/12	SampType: LCS	TestCode: M_HG_SOLID	Units: mg/Kg	Prep Date: 11/30/2012	Run ID: CETAC_121203A						
Client ID: ZZZZZ	Batch ID: 66395	TestNo: SW7471A		Analysis Date: 12/3/2012	SeqNo: 2298534						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.2454	0.020	0.2483	0.00299	97.6	80	120	0	0		
Sample ID: 12110922-009AMS	SampType: MS	TestCode: M_HG_SOLID	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: CETAC_121203D						
Client ID: LM-SB10-(24-36)-11	Batch ID: 66395	TestNo: SW7471A		Analysis Date: 12/3/2012	SeqNo: 2298687						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	3.748	0.21	0.2595	3.632	44.7	75	125	0	0		S
Sample ID: 12110922-009AMSD	SampType: MSD	TestCode: M_HG_SOLID	Units: mg/Kg-dry	Prep Date: 11/30/2012	Run ID: CETAC_121203D						
Client ID: LM-SB10-(24-36)-11	Batch ID: 66395	TestNo: SW7471A		Analysis Date: 12/3/2012	SeqNo: 2298706						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	3.503	0.21	0.263	3.632	-49.1	75	125	3.748	6.76	20	S

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**STAT Analysis Corporation****PREP BATCH REPORT**

Prep Start Date: 12/3/2012 6:22:00 P

Prep End Date: 12/3/2012 7:00:00 P

Prep Batch 66448 Prep Code: M\_HG\_S\_PRE Technician: LB

Prep Factor Units:

mL / g

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS1 12/3/12			0.3	0	0	30	100.000	12/3/2012	12/3/2012
HGLCSS1 12/3/12			0.302	0	0	30	99.338	12/3/2012	12/3/2012
12111017-001B	Soil		0.323	0	0	30	92.879	12/3/2012	12/3/2012
12110922-013A	Soil		0.307	0	0	30	97.720	12/3/2012	12/3/2012
12110922-014A	Soil		0.308	0	0	30	97.403	12/3/2012	12/3/2012
12110922-015A	Soil		0.338	0	0	30	88.757	12/3/2012	12/3/2012
12110922-016A	Soil		0.366	0	0	30	81.967	12/3/2012	12/3/2012
12110922-017A	Soil		0.309	0	0	30	97.087	12/3/2012	12/3/2012
12110922-018A	Soil		0.315	0	0	30	95.238	12/3/2012	12/3/2012
12110922-019A	Soil		0.306	0	0	30	98.039	12/3/2012	12/3/2012
12110922-020B	Soil		0.341	0	0	30	87.977	12/3/2012	12/3/2012
12110922-021B	Soil		0.38	0	0	30	78.947	12/3/2012	12/3/2012
12110922-022B	Soil		0.355	0	0	30	84.507	12/3/2012	12/3/2012
12111018-001B	Soil		0.317	0	0	30	94.637	12/3/2012	12/3/2012
12111018-002B	Soil		0.329	0	0	30	91.185	12/3/2012	12/3/2012
12111018-003B	Soil		0.309	0	0	30	97.087	12/3/2012	12/3/2012
12111018-004B	Soil		0.361	0	0	30	83.102	12/3/2012	12/3/2012
12111004-001B	Soil		0.311	0	0	30	96.463	12/3/2012	12/3/2012
12111004-002B	Soil		0.351	0	0	30	85.470	12/3/2012	12/3/2012
12111004-006B	Soil		0.351	0	0	30	85.470	12/3/2012	12/3/2012
12111004-008B	Soil		0.322	0	0	30	93.168	12/3/2012	12/3/2012
12111004-012B	Soil		0.36	0	0	30	83.333	12/3/2012	12/3/2012
12111004-006BMS	Soil		0.363	0	0	30	82.645	12/3/2012	12/3/2012
12111004-006BMSD	Soil		0.356	0	0	30	84.270	12/3/2012	12/3/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

BatchID: 66448

Sample ID: HGMBS1 12/3/12		SampType: MBLK	TestCode: M_HG_SOLID Units: mg/Kg			Prep Date: 12/3/2012			Run ID: CETAC_121204B			
Client ID: ZZZZZ		Batch ID: 66448	TestNo: SW7471A			Analysis Date: 12/4/2012			SeqNo: 2299593			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.009	0.020								J	
Sample ID: HGLCSS1 12/3/12		SampType: LCS	TestCode: M_HG_SOLID Units: mg/Kg			Prep Date: 12/3/2012			Run ID: CETAC_121204B			
Client ID: ZZZZZ		Batch ID: 66448	TestNo: SW7471A			Analysis Date: 12/4/2012			SeqNo: 2299594			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.2404	0.020	0.2483	0.009	93.2	80	120	0	0		
Sample ID: 12111004-006BMS		SampType: MS	TestCode: M_HG_SOLID Units: mg/Kg-dry			Prep Date: 12/3/2012			Run ID: CETAC_121204D			
Client ID: ZZZZZ		Batch ID: 66448	TestNo: SW7471A			Analysis Date: 12/4/2012			SeqNo: 2300501			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.2304	0.018	0.2295	0.02089	91.3	75	125	0	0		
Sample ID: 12111004-006BMSD		SampType: MSD	TestCode: M_HG_SOLID Units: mg/Kg-dry			Prep Date: 12/3/2012			Run ID: CETAC_121204D			
Client ID: ZZZZZ		Batch ID: 66448	TestNo: SW7471A			Analysis Date: 12/4/2012			SeqNo: 2300502			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.2377	0.019	0.234	0.02089	92.7	75	125	0.2304	3.14	20	

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

Prep Start Date: 11/30/2012 5:15:00

Prep End Date: 11/30/2012 7:15:00

Prep Factor Units:

mL / mL

Prep Batch 66394 Prep Code: M\_HG\_W\_PR Technician: LB

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW1 11/30/12			30	0	0	30	1.000	11/30/2012	11/30/2012
HGLCSW1 11/30/12			30	0	0	30	1.000	11/30/2012	11/30/2012
HGMBTA1 11/29/12			30	0	0	30	1.000	11/30/2012	11/30/2012
12110964-001A	Soil		30	0	0	30	1.000	11/30/2012	11/30/2012
12110964-001AMS	Soil		30	0	0	30	1.000	11/30/2012	11/30/2012
HGMBTA1 11/28/12			30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-004A	Liquid		30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-007A	Sludge		30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-007AMS	Sludge		30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-007AMSD	Sludge		30	0	0	30	1.000	11/30/2012	11/30/2012
12110922-020B	Soil		30	0	0	30	1.000	11/30/2012	11/30/2012
12110922-021B	Soil		30	0	0	30	1.000	11/30/2012	11/30/2012
12110922-022B	Soil		30	0	0	30	1.000	11/30/2012	11/30/2012
12110941-001A	Soil		30	0	0	30	1.000	11/30/2012	11/30/2012
HGMBTC 11/28/12			30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-001A	Liquid		30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-002A	Liquid		10	0	0	30	3.000	11/30/2012	11/30/2012 >
12110921-003A	Liquid		30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-005A	Liquid		30	0	0	30	1.000	11/30/2012	11/30/2012
12110966-006C	Water		30	0	0	30	1.000	11/30/2012	11/30/2012
12110921-006A	Sludge		30	0	0	30	1.000	11/30/2012	11/30/2012

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** 66394

Sample ID: HGMFTA1 11/28/12	SampType: MBLK	TestCode: M_1311_HG	Units: mg/L	Prep Date: 11/30/2012	Run ID: CETAC_121203B
Client ID: ZZZZZ	Batch ID: 66394	TestNo: SW1311/7470		Analysis Date: 12/3/2012	SeqNo: 2298566
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	ND	0.00020			
<hr/>					
Sample ID: 12110921-007AMS	SampType: MS	TestCode: M_1311_HG	Units: mg/L	Prep Date: 11/30/2012	Run ID: CETAC_121203B
Client ID: ZZZZZ	Batch ID: 66394	TestNo: SW1311/7470		Analysis Date: 12/3/2012	SeqNo: 2298576
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	0.00255	0.00020	0.0025	0.00004	100
				75	125
				0	0
<hr/>					
Sample ID: 12110921-007AMSD	SampType: MSD	TestCode: M_1311_HG	Units: mg/L	Prep Date: 11/30/2012	Run ID: CETAC_121203B
Client ID: ZZZZZ	Batch ID: 66394	TestNo: SW1311/7470		Analysis Date: 12/3/2012	SeqNo: 2298577
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	0.00255	0.00020	0.0025	0.00004	100
				75	125
				0.00255	0
					20
<hr/>					
Sample ID: HGMBW1 11/30/12	SampType: MBLK	TestCode: M_HG_WATE	Units: mg/L	Prep Date: 11/30/2012	Run ID: CETAC_121203B
Client ID: ZZZZZ	Batch ID: 66394	TestNo: SW7470A		Analysis Date: 12/3/2012	SeqNo: 2298568
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	ND	0.00020			
<hr/>					
Sample ID: HGLCSW1 11/30/12	SampType: LCS	TestCode: M_HG_WATE	Units: mg/L	Prep Date: 11/30/2012	Run ID: CETAC_121203B
Client ID: ZZZZZ	Batch ID: 66394	TestNo: SW7470A		Analysis Date: 12/3/2012	SeqNo: 2298569
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Mercury	0.00236	0.00020	0.0025	0	94.4
				85	115
				0	0

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	*	H/HT - Holding Time Exceeded	

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85282

Sample ID: 12110964-001A DUP	SampType: DUP	TestCode: PH_S	Units: pH Units	Prep Date: 11/29/2012	Run ID: PH_121129A						
Client ID: ZZZZZ	Batch ID: R85282	TestNo: SW9045C		Analysis Date: 11/29/2012	SeqNo: 2297064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8	0	0	0	0	0	0	7.99	0.125	20	

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85306

Sample ID: 12110922-012ADUP	SampType: DUP	TestCode: PH_S	Units: pH Units	Prep Date: 11/30/2012	Run ID: PH_121130A						
Client ID: LM-SB01-(0-10)-112	Batch ID: R85306	TestNo: SW9045C		Analysis Date: 11/30/2012	SeqNo: 2297612						
<hr/>											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.46	0	0	0	0	0	0	8.58	1.41	20	

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85277

Sample ID: PMMBK 11/28/12	SampType: MBLK	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128B
Client ID: ZZZZZ	Batch ID: R85277	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296923
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Percent Moisture	ND	0.200			
<hr/>					
Sample ID: PMLCS-S 11/28/12	SampType: LCS	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128B
Client ID: ZZZZZ	Batch ID: R85277	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296924
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Percent Moisture	4.84	0.200	5	0	96.8
					80    120    0    0    *
<hr/>					
Sample ID: PMLCS-W 11/28/12	SampType: LCS	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128B
Client ID: ZZZZZ	Batch ID: R85277	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296925
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Percent Moisture	99.82	0.200	99.8	0	100
					80    120    0    0    *
<hr/>					
Sample ID: 12110922-019A DUP	SampType: DUP	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128B
Client ID: LM-Concrete-112712	Batch ID: R85277	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296927
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Percent Moisture	2.58	0.200	0	0	0
					0    2.68    3.80    20    *

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	*	H/HT - Holding Time Exceeded	

**CLIENT:** Weston Solutions  
**Work Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL

## ANALYTICAL QC SUMMARY REPORT

**BatchID:** R85280

Sample ID: PMMBK3 11/28/12	SampType: MBLK	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128D
Client ID: ZZZZZ	Batch ID: R85280	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296989
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	ND	0.200			
<hr/>					
Sample ID: PMLCS-S3 11/28/12	SampType: LCS	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128D
Client ID: ZZZZZ	Batch ID: R85280	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296990
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	4.58	0.200	5	0	91.6 80 120 0 0 0 *
<hr/>					
Sample ID: PMLCS-W3 11/28/12	SampType: LCS	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128D
Client ID: ZZZZZ	Batch ID: R85280	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296991
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	99.82	0.200	99.8	0	100 80 120 0 0 0 *
<hr/>					
Sample ID: 12110936-003B DUP	SampType: DUP	TestCode: PMOIST	Units: wt%	Prep Date: 11/28/2012	Run ID: BALANCE_121128D
Client ID: ZZZZZ	Batch ID: R85280	TestNo: D2974		Analysis Date: 11/29/2012	SeqNo: 2296993
<hr/>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	15.75	0.200	0	0	0 0 0 16.92 7.16 20 *

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits * - Non Accredited Parameter	S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits H/HT - Holding Time Exceeded	B - Analyte detected in the associated Method Blank E - Value above quantitation range
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**LOEWENTHAL METALS  
CHICAGO, ILLINOIS  
DATA VALIDATION REPORT**

**Date:** December 12, 2012

**Laboratory:** STAT Analysis Corporation (STAT), Chicago, Illinois

**Laboratory Project #:** 12110922

**Data Validation Performed By:** Lisa Graczyk, Weston Solutions, Inc. (WESTON<sup>®</sup>) Superfund Technical Assessment and Response Team (START)

**Weston Work Order #:** 20405.012.001.1714.00

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for 23 soil samples collected for the Loewenthal Metals Site that were analyzed for the following parameters and U.S. Environmental Protection Agency (U.S. EPA) methods:

- Volatile Organic Compounds (VOC) by SW-846 Method 8260B
- Semivolatile Organic Carbons (SVOC) by SW-846 Method 8270C
- Polychlorinated Biphenyls (PCB) by SW-846 Method 8082
- Pesticides by SW-846 Method 8081
- Metals by SW-846 Methods 6020 and 7471A
- Toxicity Characteristic Leaching Procedure (TCLP) TCLP Metals by SW-846 Methods 1311, 6020, and 7470A
- pH by SW-846 Method 9045C

A level II data package was requested from STAT. The data validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidance for Superfund Organic Methods Data Review" dated June 2008 and "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

Data Validation Report  
Loewenthal Metals Site  
STAT Analysis Corporation  
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## VOCs by SW-846 METHOD 8260B

### 1. Samples

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
LM-SB14-(24-32)-112712	12110922-020	Soil	11/27/2012	12/3/2012
LM-SB16-(24-36)-112712	12110922-021	Soil	11/27/2012	12/3/2012
LM-SB05-(6-16)-112712	12110922-022	Soil	11/27/2012	12/3/2012
LM-SB05-(6-16)-112712D	12110922-023	Soil	11/27/2012	12/3/2012

### 2. Holding Times

The samples were analyzed within the required holding time limit of 14 days from sample collection.

### 3. Blanks

A method blank was analyzed with the VOC analyses. The blank was free of target analytes above the reporting limits. Chloromethane and methylene chloride were detected below the reporting limit in the method blank; however, these compounds were not detected in the samples and no qualifications were required.

### 4. Surrogate Results

The surrogate recovery results were within the laboratory-established quality control (QC) limits.

### 5. Laboratory Control Sample (LCS) Results

The LCS and LCS duplicate (LCSD) recoveries and relative percent differences (RPD) were within laboratory QC limits.

### 6. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results

Site-specific MS and MSDs were not analyzed. No qualifications are required.

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## **7. Field Duplicate Results**

There is one field duplicate identified with a "D" suffix in the sample name. Acetone was detected in the filed duplicate but not in the parent sample. The acetone result detected in the field duplicate was below the reporting limit in the investigative sample. No qualifications were applied.

## **8. Overall Assessment**

The VOC data are acceptable for use based on the information received.

## **SVOCs BY SW-846 METHOD 8270C**

### **1. Samples**

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Latest Date Analyzed
LM-SB14-(24-32)-112712	12110922-020	Soil	11/27/2012	11/29/2012	11/29/2012
LM-SB16-(24-36)-112712	12110922-021	Soil	11/27/2012	11/29/2012	11/29/2012
LM-SB05-(6-16)-112712	12110922-022	Soil	11/27/2012	11/29/2012	11/29/2012

### **2. Holding Times**

The samples were analyzed within the required holding time limit of 14 days from sample collection to extraction and 40 days from extraction to analysis.

### **3. Blanks**

A method blank was analyzed with the SVOC analyses. The method blank was free of target compound contamination above the reporting limits.

### **4. Surrogate Results**

The surrogate recoveries were within the laboratory-established QC limits.

### **5. LCS Results**

The percent recoveries for the LCS results were within the laboratory-established QC limits.

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## **6. MS and MSD Results**

A site-specific MS and MSD were not analyzed. For the MS and MSD that were analyzed using a sample from another site, the percent recoveries and RPDs were within QC limits.

## **7. Overall Assessment**

The SVOC data are acceptable for use based on the information received.

## **PCBs BY U.S. EPA SW-846 METHOD 8082**

### **1. Samples**

The following table summarizes the samples for which this data validation was conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>
LM-SB14-(24-32)-112712	12110922-020	Soil	11/27/2012	11/30/2012	11/30/2012
LM-SB16-(24-36)-112712	12110922-021	Soil	11/27/2012	11/30/2012	11/30/2012
LM-SB05-(6-16)-112712	12110922-022	Soil	11/27/2012	11/30/2012	11/30/2012

### **2. Holding Times**

The samples were analyzed within the required holding time limit of 14 days from sample collection to extraction and 40 days from extraction to analysis.

### **3. Blanks**

A method blank was analyzed with the PCB analyses. The method blank was free of target compound contamination above the reporting limit.

### **4. Surrogates**

The surrogate recoveries were within QC limits.

### **5. LCS Results**

The LCS recoveries were within the laboratory-established QC limits.

**6. MS and MSD Results**

A site-specific MS and MSD were not analyzed. For the MS and MSD that were analyzed using a sample from another site, the percent recoveries and RPDs were within QC limits.

**7. Overall Assessment**

The PCB data are acceptable for use based on the information received.

**PESTICIDES BY U.S. EPA SW-846 METHOD 8081**

**1. Samples**

The following table summarizes the samples for which this data validation was conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>
LM-SB14-(24-32)-112712	12110922-020	Soil	11/27/2012	11/30/2012	11/30/2012
LM-SB16-(24-36)-112712	12110922-021	Soil	11/27/2012	11/30/2012	11/30/2012
LM-SB05-(6-16)-112712	12110922-022	Soil	11/27/2012	11/30/2012	11/30/2012

**2. Holding Times**

The samples were analyzed within the required holding time limit of 14 days from sample collection to extraction and 40 days from extraction to analysis.

**3. Blanks**

A method blank was analyzed with the pesticide analyses. The method blank was free of target compound contamination above the reporting limit.

**4. Surrogates**

The surrogate recoveries were within QC limits.

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STAT Analysis Corporation  
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**5. LCS Results**

The LCS recoveries were within the laboratory-established QC limits.

**6. MS and MSD Results**

A site-specific MS and MSD were analyzed using sample LM-SB16-(24-36)-112712 for the spike. The percent recoveries and RPDs were with QC limits.

**7. Overall Assessment**

The pesticide data are acceptable for use based on the information received.

**TOTAL METALS BY SW-846 METHODS 6020 AND 7471A**

**1. Samples**

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
LM-SB03-(24-36)-112712	12110922-001	Soil	11/27/2012	11/30/2012 – 12/3/2012
LM-SB15-(12-24)-112712	12110922-002	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB16D-(12-24)-112712	12110922-003	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB03-(12-24)-112712	12110922-004	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB14-(6-12)-112712	12110922-005	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB23-(6-12)-112712	12110922-006	Soil	11/27/2012	12/3/2012 – 12/5/2012
LM-SB14-(12-24)-112712	12110922-007	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB17-(24-36)-112712	12110922-008	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB10-(24-36)-112712	12110922-009	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB17-(12-24)-112712	12110922-010	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB16-(0-6)-112712	12110922-011	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB01-(0-10)-112712	12110922-012	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB10-(24-36)-112712D	12110922-013	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB07-(6-12)-112712	12110922-014	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB07-(12-24)-112712	12110922-015	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB19-(12-24)-112712	12110922-016	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB23-(12-24)-112712	12110922-017	Soil	11/27/2012	12/3/2012 – 12/4/2012
LM-SB23-(12-24)-112712D	12110922-018	Soil	11/27/2012	12/4/2012
LM-Concrete-112712	12110922-019	Soil	11/27/2012	12/4/2012
LM-SB14-(24-32)-112712	12110922-020	Soil	11/27/2012	12/4/2012
LM-SB16-(24-36)-112712	12110922-021	Soil	11/27/2012	11/30/2012 – 12/3/2012

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Samples	Lab ID	Matrix	Date Collected	Date Analyzed
LM-SB05-(6-16)-112712	12110922-022	Soil	11/27/2012	12/4/2012

**2. Holding Times**

The samples were analyzed within the required holding time limit of 28 days from sample collection to analysis for mercury and 180 days from sample collection to analysis for all other metals.

**3. Blank Results**

Method blanks were analyzed with the metals analysis. The blanks were free of target analyte contamination above the reporting limits. Some metals were detected below the reporting limits in the method blanks. However, the sample concentrations were either non-detect or much greater than the blank concentrations and no qualifications were required.

**4. LCS Results**

The LCS recoveries were within the laboratory-established QC limits.

**5. MS and MSD Results**

Site-specific MS and MSDs were analyzed. The percent recoveries and RPDs were within QC limits except for as follows.

In some instances, metals were not adequately recovered and the spike amount was more than four times lower than the sample concentration. In these cases, no qualification is required.

In the spike of sample LM-SB16-(24-36)-112712, the following metals were detected low: arsenic, cadmium, chromium, and selenium. The following metal was detected high: silver.

In the spike of sample LM-SB23-(6-12)-11212, the following metals were detected low: arsenic, cadmium, chromium, selenium, and silver.

In the spiked sample for those metals detected low, the quantitation limits for non-detects were flagged "UJ" and the detected results were flagged "J" as estimated due to potential matrix interference. In the spiked sample for those metals detected high, the detected results only were flagged "J" as estimated due to potential matrix interference.

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**6. Field Duplicate Results**

There are two field duplicates associated with this work order. The RPDs were calculated for detected metals.

For field duplicate LM-SB23-(12-24)-112712D , the RPDs were below with 50 with two exceptions. Mercury had an RPD of 162 and silver had an RPD of 150.

For field duplicate LM-SB10-(24-36)-112712D, three metals had high RPDs, exceeding a standard QC limit of 50 RPD or less. Specifically, mercury, arsenic, and lead had RPDs ranging from of 77 to 117.

These results indicate some heterogeneity associated with some metals in these samples.

**7. Overall Assessment**

The metals data are acceptable for use as qualified based on the information received.

Data Validation Report  
Loewenthal Metals Site  
STAT Analysis Corporation  
Laboratory Project #: 12110922

## TCLP METALS BY SW-846 METHODS 1311, 6020, AND 7470A

### 1. Samples

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
LM-SB14-(24-32)-112712	12110922-020	Soil	11/27/2012	11/29/2012 – 12/3/2012
LM-SB16-(24-36)-112712	12110922-021	Soil	11/27/2012	11/29/2012 – 12/3/2012
LM-SB05-(6-16)-112712	12110922-022	Soil	11/27/2012	11/29/2012 – 12/3/2012

### 2. Holding Times

The samples were analyzed within the required holding time limit of 28 days from sample collection to analysis for mercury and 180 days from sample collection to analysis for all other metals.

### 3. Blank Results

Method blanks were analyzed with the TCLP metals analysis. The blanks were free of target analyte contamination above the reporting limits. Some metals were detected below the reporting limits in the method blanks. However, the sample concentrations were either non-detect or much greater than the blank concentrations and no qualifications were required.

### 4. LCS Results

The LCS recoveries were within the laboratory-established QC limits for target analytes.

### 5. MS and MSD Results

A site-specific MS and MSD were not analyzed. For the MS and MSD analyzed using a sample from another site, the percent recoveries and RPDs were within QC limits.

### 6. Overall Assessment

The TCLP metals data are acceptable for use based on the information received.

Data Validation Report  
Loewenthal Metals Site  
STAT Analysis Corporation  
Laboratory Project #: 12110922

## GENERAL CHEMISTRY PARAMETERS (pH by SW-846 Method 9045C)

### 1. Samples

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
LM-SB03-(24-36)-112712	12110922-001	Soil	11/27/2012	11/29/2012
LM-SB15-(12-24)-112712	12110922-002	Soil	11/27/2012	11/29/2012
LM-SB16D-(12-24)-112712	12110922-003	Soil	11/27/2012	11/29/2012
LM-SB03-(12-24)-112712	12110922-004	Soil	11/27/2012	11/29/2012
LM-SB14-(6-12)-112712	12110922-005	Soil	11/27/2012	11/29/2012
LM-SB23-(6-12)-112712	12110922-006	Soil	11/27/2012	11/29/2012
LM-SB14-(12-24)-112712	12110922-007	Soil	11/27/2012	11/29/2012
LM-SB17-(24-36)-112712	12110922-008	Soil	11/27/2012	11/29/2012
LM-SB10-(24-36)-112712	12110922-009	Soil	11/27/2012	11/29/2012
LM-SB17-(12-24)-112712	12110922-010	Soil	11/27/2012	11/29/2012
LM-SB16-(0-6)-112712	12110922-011	Soil	11/27/2012	11/29/2012
LM-SB01-(0-10)-112712	12110922-012	Soil	11/27/2012	11/30/2012
LM-SB10-(24-36)-112712D	12110922-013	Soil	11/27/2012	11/30/2012
LM-SB07-(6-12)-112712	12110922-014	Soil	11/27/2012	11/30/2012
LM-SB07-(12-24)-112712	12110922-015	Soil	11/27/2012	11/30/2012
LM-SB19-(12-24)-112712	12110922-016	Soil	11/27/2012	11/30/2012
LM-SB23-(12-24)-112712	12110922-017	Soil	11/27/2012	11/30/2012
LM-SB23-(12-24)-112712D	12110922-018	Soil	11/27/2012	11/30/2012
LM-Concrete-112712	12110922-019	Soil	11/27/2012	11/30/2012
LM-SB14-(24-32)-112712	12110922-020	Soil	11/27/2012	11/30/2012
LM-SB16-(24-36)-112712	12110922-021	Soil	11/27/2012	11/30/2012
LM-SB05-(6-16)-112712	12110922-022	Soil	11/27/2012	11/30/2012

### 2. Holding Times

The holding times were acceptable.

### 3. Duplicate Results

A laboratory duplicate and field duplicate were analyzed. The RPDs were 0.125 and 1.41 which are within QC limits.

Data Validation Report  
Loewenthal Metals Site  
STAT Analysis Corporation  
Laboratory Project #: 12110922

**4. Overall Assessment**

The pH data are acceptable for use based on the information received.

Data Validation Report  
Loewenthal Metals Site  
STAT Analysis Corporation  
Laboratory Project #: 12110922

**ATTACHMENT**

**ACCUTEST LABORATORIES  
RESULTS SUMMARY WITH QUALIFIERS**

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB03-(24-36)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 2:35:00 PM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-001

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>						
Mercury	SW7471A 1.8	0.21		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 11	1.2		mg/Kg-dry	10	11/30/2012
Barium	280	1.2		mg/Kg-dry	10	11/30/2012
Cadmium	11	0.6		mg/Kg-dry	10	11/30/2012
Chromium	14	1.2		mg/Kg-dry	10	11/30/2012
Copper	340	3		mg/Kg-dry	10	11/30/2012
Lead	3100	0.6		mg/Kg-dry	10	11/30/2012
Manganese	190	1.2		mg/Kg-dry	10	11/30/2012
Selenium	1.8	1.2		mg/Kg-dry	10	12/3/2012
Silver	ND	1.2		mg/Kg-dry	10	11/30/2012
Zinc	3900	60		mg/Kg-dry	100	12/5/2012
<b>pH (25 °C)</b>						
pH	SW9045C 8.5			pH Units	1	11/29/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 7.6	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:**  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-002

**Client Sample ID:** LM-SB15-(12-24)-112712  
**Collection Date:** 11/27/2012 10:45:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>					
Mercury	2	0.22		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>					
Arsenic	5.4	1.4		mg/Kg-dry	10	12/3/2012
Barium	660	1.4		mg/Kg-dry	10	12/3/2012
Cadmium	19	0.72		mg/Kg-dry	10	12/3/2012
Chromium	63	1.4		mg/Kg-dry	10	12/3/2012
Copper	6000	36		mg/Kg-dry	100	12/4/2012
Lead	13000	7.2		mg/Kg-dry	100	12/4/2012
Manganese	170	14		mg/Kg-dry	100	12/4/2012
Selenium	ND	1.4		mg/Kg-dry	10	12/3/2012
Silver	2.4	1.4		mg/Kg-dry	10	12/3/2012
Zinc	5500	72		mg/Kg-dry	100	12/4/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>					
pH	7.9			pH Units	1	11/29/2012
<b>Percent Moisture</b>	<b>D2974</b>					
Percent Moisture	23.3	0.2	*	wt%	1	11/29/2012

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB16D-(12-24)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 3:00:00 PM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-003		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>					
Mercury	8.8	0.27		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>					
Arsenic	46	1.5		mg/Kg-dry	10	12/3/2012
Barium	1200	1.5		mg/Kg-dry	10	12/3/2012
Cadmium	47	0.77		mg/Kg-dry	10	12/3/2012
Chromium	51	1.5		mg/Kg-dry	10	12/3/2012
Copper	17000	190		mg/Kg-dry	500	12/4/2012
Lead	22000	39		mg/Kg-dry	500	12/4/2012
Manganese	520	77		mg/Kg-dry	500	12/4/2012
Selenium	5.1	1.5		mg/Kg-dry	10	12/3/2012
Silver	9.2	1.5		mg/Kg-dry	10	12/3/2012
Zinc	21000	390		mg/Kg-dry	500	12/4/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>					
pH	7.8			pH Units	1	11/29/2012
<b>Percent Moisture</b>	<b>D2974</b>					
Percent Moisture	31.0	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL30000I; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

Client: Weston Solutions

Client Sample ID: LM-SB03-(12-24)-112712

Lab Order: 12110922

Collection Date: 11/27/2012 2:35:00 PM

Project: Lowenthal Metals Chicago, IL

Matrix: Soil

Lab ID: 12110922-004

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	SW7471A				Prep Date: 11/30/2012	Analyst: LB
Mercury	10	2.2		mg/Kg-dry	100	12/3/2012
Metals by ICP/MS	SW6020 (SW3050B)				Prep Date: 11/30/2012	Analyst: JG
Arsenic	16	1.2		mg/Kg-dry	10	12/3/2012
Barium	1200	1.2		mg/Kg-dry	10	12/3/2012
Cadmium	61	0.6		mg/Kg-dry	10	12/3/2012
Chromium	19	1.2		mg/Kg-dry	10	12/3/2012
Copper	7000	150		mg/Kg-dry	500	12/4/2012
Lead	23000	30		mg/Kg-dry	500	12/4/2012
Manganese	410	60		mg/Kg-dry	500	12/4/2012
Selenium	4.6	1.2		mg/Kg-dry	10	12/3/2012
Silver	2.8	1.2		mg/Kg-dry	10	12/3/2012
Zinc	37000	300		mg/Kg-dry	500	12/4/2012
pH (25 °C)	SW9045C			Prep Date: 11/29/2012	Analyst: PBG	
pH	7.9			pH Units	1	11/29/2012
Percent Moisture	D2974			Prep Date: 11/28/2012	Analyst: RW	
Percent Moisture	9.9	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-005

**Client Sample ID:** LM-SB14-(6-12)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.22	0.018		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	4.2	0.93		mg/Kg-dry	10	12/3/2012
Barium	970	0.93		mg/Kg-dry	10	12/3/2012
Cadmium	1.4	0.46		mg/Kg-dry	10	12/3/2012
Chromium	15	0.93		mg/Kg-dry	10	12/3/2012
Copper	93	2.3		mg/Kg-dry	10	12/4/2012
Lead	980	0.46		mg/Kg-dry	10	12/4/2012
Manganese	200	0.93		mg/Kg-dry	10	12/4/2012
Selenium	ND	0.93		mg/Kg-dry	10	12/3/2012
Silver	ND	0.93		mg/Kg-dry	10	12/3/2012
Zinc	780	4.6		mg/Kg-dry	10	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.6			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	8.6	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB23-(6-12)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 10:25:00 AM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-006

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>	<b>SW7471A</b>					
Mercury	1.1	0.19		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>					
Arsenic	12 J	1.5		mg/Kg-dry	10	12/5/2012
Barium	1200	1.5		mg/Kg-dry	10	12/5/2012
Cadmium	17 J	0.75		mg/Kg-dry	10	12/5/2012
Chromium	29 J	1.5		mg/Kg-dry	10	12/5/2012
Copper	3200	37		mg/Kg-dry	100	12/5/2012
Lead	5700	0.75		mg/Kg-dry	10	12/5/2012
Manganese	290	1.5		mg/Kg-dry	10	12/5/2012
Selenium	2.1 J	1.5		mg/Kg-dry	10	12/5/2012
Silver	1.6 J	1.5		mg/Kg-dry	10	12/5/2012
Zinc	6200	75		mg/Kg-dry	100	12/5/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>					
pH	8.3			pH Units	1	11/29/2012
<b>Percent Moisture</b>	<b>D2974</b>					
Percent Moisture	11.4	0.2	*	wt%	1	11/29/2012

**Qualifiers:**

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- HT - Sample received past holding time
- \* - Non-accredited parameter

- RL - Reporting / Quantitation Limit for the analysis
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Holding time exceeded

12/11/12

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB14-(12-24)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 10:55:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-007		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	SW7471A 0.23	0.02		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 2.8	1.2		mg/Kg-dry	10	12/3/2012
Barium	1800	1.2		mg/Kg-dry	10	12/3/2012
Cadmium	4.4	0.61		mg/Kg-dry	10	12/3/2012
Chromium	28	1.2		mg/Kg-dry	10	12/3/2012
Copper	240	3		mg/Kg-dry	10	12/4/2012
Lead	3300	0.61		mg/Kg-dry	10	12/4/2012
Manganese	130	1.2		mg/Kg-dry	10	12/4/2012
Selenium	ND	1.2		mg/Kg-dry	10	12/3/2012
Silver	ND	1.2		mg/Kg-dry	10	12/3/2012
Zinc	1000	6.1		mg/Kg-dry	10	12/4/2012
<b>pH (25 °C)</b>						
pH	SW9045C 8.2			pH Units	1	11/29/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 11.5	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

Client: Weston Solutions

Client Sample ID: LM-SB17-(24-36)-112712

Lab Order: 12110922

Collection Date: 11/27/2012 10:30:00 AM

Project: Lowenthal Metals Chicago, IL

Matrix: Soil

Lab ID: 12110922-008

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury			SW7471A			
Mercury	0.067	0.022		mg/Kg-dry	1	12/3/2012
Metals by ICP/MS			SW6020 (SW3050B)			
Arsenic	25	1.4		mg/Kg-dry	10	12/3/2012
Barium	85	1.4		mg/Kg-dry	10	12/3/2012
Cadmium	9.6	0.69		mg/Kg-dry	10	12/3/2012
Chromium	13	1.4		mg/Kg-dry	10	12/3/2012
Copper	49	3.4		mg/Kg-dry	10	12/4/2012
Lead	110	0.69		mg/Kg-dry	10	12/4/2012
Manganese	130	1.4		mg/Kg-dry	10	12/4/2012
Selenium	3.2	1.4		mg/Kg-dry	10	12/3/2012
Silver	ND	1.4		mg/Kg-dry	10	12/3/2012
Zinc	1300	6.9		mg/Kg-dry	10	12/4/2012
pH (25 °C)			SW9045C			
pH	6.1			pH Units	1	11/29/2012
Percent Moisture			D2974			
Percent Moisture	21.3	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-009

**Client Sample ID:** LM-SB10-(24-36)-112712  
**Collection Date:** 11/27/2012 1:30:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	SW7471A 3.6	0.21		mg/Kg-dry	10	12/3/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 40	1.1		mg/Kg-dry	10	12/3/2012
Barium	240	1.1		mg/Kg-dry	10	12/3/2012
Cadmium	1.8	0.53		mg/Kg-dry	10	12/3/2012
Chromium	8.9	1.1		mg/Kg-dry	10	12/3/2012
Copper	680	53		mg/Kg-dry	200	12/4/2012
Lead	13000	11		mg/Kg-dry	200	12/4/2012
Manganese	230	21		mg/Kg-dry	200	12/4/2012
Selenium	ND	1.1		mg/Kg-dry	10	12/3/2012
Silver	1.5	1.1		mg/Kg-dry	10	12/3/2012
Zinc	620	110		mg/Kg-dry	200	12/4/2012
<b>pH (25 °C)</b>						
pH	SW9045C 8.0			pH Units	1	11/29/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 5.9	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB17-(12-24)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 10:30:00 AM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-010

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.59	0.021		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	5.1	1.2		mg/Kg-dry	10	12/3/2012
Barium	78	1.2		mg/Kg-dry	10	12/3/2012
Cadmium	1.4	0.58		mg/Kg-dry	10	12/3/2012
Chromium	7.5	1.2		mg/Kg-dry	10	12/3/2012
Copper	150	5.8		mg/Kg-dry	20	12/4/2012
Lead	1600	1.2		mg/Kg-dry	20	12/4/2012
Manganese	320	2.3		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.2		mg/Kg-dry	10	12/3/2012
Silver	ND	1.2		mg/Kg-dry	10	12/3/2012
Zinc	1900	12		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	7.3			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	15.8	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL30001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-011

**Client Sample ID:** LM-SB16-(0-6)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.25	0.021		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	4.6	1.1		mg/Kg-dry	10	12/3/2012
Barium	200	1.1		mg/Kg-dry	10	12/3/2012
Cadmium	2.3	0.55		mg/Kg-dry	10	12/3/2012
Chromium	13	1.1		mg/Kg-dry	10	12/3/2012
Copper	190	5.5		mg/Kg-dry	20	12/4/2012
Lead	610	1.1		mg/Kg-dry	20	12/4/2012
Manganese	410	2.2		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.1		mg/Kg-dry	10	12/3/2012
Silver	ND	1.1		mg/Kg-dry	10	12/3/2012
Zinc	860	11		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.3			pH Units	1	11/29/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	10.9	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-012

**Client Sample ID:** LM-SB01-(0-10)-112712  
**Collection Date:** 11/27/2012 11:15:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	0.38	0.024		mg/Kg-dry	1	12/3/2012
<b>Metals by ICP/MS</b>						
			<b>SW6020 (SW3050B)</b>			
Arsenic	4.9	1.3		mg/Kg-dry	10	12/3/2012
Barium	140	1.3		mg/Kg-dry	10	12/3/2012
Cadmium	5	0.63		mg/Kg-dry	10	12/3/2012
Chromium	7.8	1.3		mg/Kg-dry	10	12/3/2012
Copper	240	6.3		mg/Kg-dry	20	12/4/2012
Lead	1200	1.3		mg/Kg-dry	20	12/4/2012
Manganese	230	2.5		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.3		mg/Kg-dry	10	12/3/2012
Silver	ND	1.3		mg/Kg-dry	10	12/3/2012
Zinc	890	13		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.6			pH Units	1	11/30/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	17.1	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-013

**Client Sample ID:** LM-SB10-(24-36)-112712D  
**Collection Date:** 11/27/2012 1:30:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>	<b>SW7471A</b>					
Mercury	1.6	0.21		mg/Kg-dry	10	12/4/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>					
Arsenic	10	1		mg/Kg-dry	10	12/3/2012
Barium	210	1		mg/Kg-dry	10	12/3/2012
Cadmium	1.8	0.5		mg/Kg-dry	10	12/3/2012
Chromium	11	1		mg/Kg-dry	10	12/3/2012
Copper	990	5		mg/Kg-dry	20	12/4/2012
Lead	3400	1		mg/Kg-dry	20	12/4/2012
Manganese	320	2		mg/Kg-dry	20	12/4/2012
Selenium	ND	1		mg/Kg-dry	10	12/3/2012
Silver	ND	1		mg/Kg-dry	10	12/3/2012
Zinc	930	10		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>	<b>SW9045C</b>					
pH	7.6			pH Units	1	11/30/2012
<b>Percent Moisture</b>	<b>D2974</b>					
Percent Moisture	5.8	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB07-(6-12)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 11:20:00 AM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-014

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>						
Mercury	SW7471A 0.46	0.022		mg/Kg-dry	1	Prep Date: 12/3/2012 Analyst: LB 12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 5.2	1.1		mg/Kg-dry	10	Prep Date: 11/30/2012 Analyst: JG 12/3/2012
Barium	430	1.1		mg/Kg-dry	10	12/3/2012
Cadmium	4.5	0.54		mg/Kg-dry	10	12/3/2012
Chromium	20	1.1		mg/Kg-dry	10	12/3/2012
Copper	360	5.4		mg/Kg-dry	20	12/4/2012
Lead	2200	1.1		mg/Kg-dry	20	12/4/2012
Manganese	310	2.2		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.1		mg/Kg-dry	10	12/3/2012
Silver	ND	1.1		mg/Kg-dry	10	12/3/2012
Zinc	1600	11		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>						
pH	SW9045C 8.5			pH Units	1	Prep Date: 11/30/2012 Analyst: MNG 11/30/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 12.6	0.2	*	wt%	1	Prep Date: 11/28/2012 Analyst: RW 11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-015

**Client Sample ID:** LM-SB07-(12-24)-112712  
**Collection Date:** 11/27/2012 2:50:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	0.4	0.02		mg/Kg-dry	1	12/4/2012
<b>Metals by ICP/MS</b>						
			<b>SW6020 (SW3050B)</b>			
Arsenic	5.8	0.98		mg/Kg-dry	10	12/3/2012
Barium	210	0.98		mg/Kg-dry	10	12/3/2012
Cadmium	3.2	0.49		mg/Kg-dry	10	12/3/2012
Chromium	17	0.98		mg/Kg-dry	10	12/3/2012
Copper	450	4.9		mg/Kg-dry	20	12/4/2012
Lead	920	0.49		mg/Kg-dry	10	12/3/2012
Manganese	510	2		mg/Kg-dry	20	12/4/2012
Selenium	ND	0.98		mg/Kg-dry	10	12/3/2012
Silver	ND	0.98		mg/Kg-dry	10	12/3/2012
Zinc	1300	9.8		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	8.4			pH Units	1	11/30/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	11.3	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

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H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB19-(12-24)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 9:35:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-016		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	0.11	0.021		mg/Kg-dry	1	12/4/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	9	1.4		mg/Kg-dry	10	12/3/2012
Barium	69	1.4		mg/Kg-dry	10	12/3/2012
Cadmium	10	0.69		mg/Kg-dry	10	12/3/2012
Chromium	14	1.4		mg/Kg-dry	10	12/3/2012
Copper	89	6.9		mg/Kg-dry	20	12/4/2012
Lead	200	0.69		mg/Kg-dry	10	12/3/2012
Manganese	100	2.8		mg/Kg-dry	20	12/4/2012
Selenium	ND	1.4		mg/Kg-dry	10	12/3/2012
Silver	ND	1.4		mg/Kg-dry	10	12/3/2012
Zinc	1400	14		mg/Kg-dry	20	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	7.8			pH Units	1	11/30/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	20.1	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB23-(12-24)-112712**Lab Order:** 12110922**Collection Date:** 11/27/2012 10:25:00 AM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-017

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>						
Mercury	SW7471A 5.6	0.23		mg/Kg-dry	10	Prep Date: 12/3/2012 Analyst: LB 12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 15	1.3		mg/Kg-dry	10	Prep Date: 11/30/2012 Analyst: JG 12/3/2012
Barium	440	1.3		mg/Kg-dry	10	12/3/2012
Cadmium	16	0.65		mg/Kg-dry	10	12/3/2012
Chromium	11	1.3		mg/Kg-dry	10	12/3/2012
Copper	1300	33		mg/Kg-dry	100	12/4/2012
Lead	3600	0.65		mg/Kg-dry	10	12/3/2012
Manganese	300	13		mg/Kg-dry	100	12/4/2012
Selenium	1.7	1.3		mg/Kg-dry	10	12/3/2012
Silver	12	1.3		mg/Kg-dry	10	12/3/2012
Zinc	9300	65		mg/Kg-dry	100	12/4/2012
<b>pH (25 °C)</b>						
pH	SW9045C 7.9			pH Units	1	Prep Date: 11/30/2012 Analyst: MNG 11/30/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 16.8	0.2	*	wt%	1	Prep Date: 11/28/2012 Analyst: RW 11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions**Client Sample ID:** LM-SB23-(12-24)-112712D**Lab Order:** 12110922**Collection Date:** 11/27/2012 10:25:00 AM**Project:** Lowenthal Metals Chicago, IL**Matrix:** Soil**Lab ID:** 12110922-018

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qualifier</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
<b>Mercury</b>			<b>SW7471A</b>			
Mercury	53	2.3		mg/Kg-dry	100	12/4/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>			
Arsenic	20	1.2		mg/Kg-dry	10	12/4/2012
Barium	640	1.2		mg/Kg-dry	10	12/4/2012
Cadmium	26	0.62		mg/Kg-dry	10	12/4/2012
Chromium	12	1.2		mg/Kg-dry	10	12/4/2012
Copper	1900	31		mg/Kg-dry	100	12/4/2012
Lead	7900	6.2		mg/Kg-dry	100	12/4/2012
Manganese	400	1.2		mg/Kg-dry	10	12/4/2012
Selenium	2	1.2		mg/Kg-dry	10	12/4/2012
Silver	1.7	1.2		mg/Kg-dry	10	12/4/2012
Zinc	9500	62		mg/Kg-dry	100	12/4/2012
<b>pH (25 °C)</b>			<b>SW9045C</b>			
pH	7.8			pH Units	1	11/30/2012
<b>Percent Moisture</b>			<b>D2974</b>			
Percent Moisture	18.0	0.2	*	wt%	1	11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-019

**Client Sample ID:** LM-Concrete-112712  
**Collection Date:** 11/27/2012 2:10:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Mercury</b>						
Mercury	SW7471A 0.5	0.02		mg/Kg-dry	1	Prep Date: 12/3/2012 Analyst: LB 12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B) 17	2		mg/Kg-dry	10	Prep Date: 11/30/2012 Analyst: JG 12/4/2012
Barium	130	2		mg/Kg-dry	10	12/4/2012
Cadmium	110	1		mg/Kg-dry	10	12/4/2012
Chromium	51	2		mg/Kg-dry	10	12/4/2012
Copper	320000	1000		mg/Kg-dry	2000	12/4/2012
Lead	24000	51		mg/Kg-dry	500	12/4/2012
Manganese	140	100		mg/Kg-dry	500	12/4/2012
Selenium	8.1	2		mg/Kg-dry	10	12/4/2012
Silver	62	2		mg/Kg-dry	10	12/4/2012
Zinc	58000	510		mg/Kg-dry	500	12/4/2012
<b>pH (25 °C)</b>						
pH	SW9045C 8.1			pH Units	1	Prep Date: 11/30/2012 Analyst: MNG 11/30/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974 2.7	0.2	*	wt%	1	Prep Date: 11/28/2012 Analyst: RW 11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB14-(24-32)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 10:55:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-020		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>PCBs</b>			<b>SW8082 (SW3550B)</b>		Prep Date: 11/30/2012	Analyst: PDL
Aroclor 1016	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1221	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1232	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1242	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1248	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1254	ND	0.12		mg/Kg-dry	1	11/30/2012
Aroclor 1260	ND	0.12		mg/Kg-dry	1	11/30/2012
<b>Pesticides</b>			<b>SW8081 (SW3550B)</b>		Prep Date: 11/30/2012	Analyst: PDL
4,4'-DDD	ND	0.0024		mg/Kg-dry	1	11/30/2012
4,4'-DDE	ND	0.0024		mg/Kg-dry	1	11/30/2012
4,4'-DDT	ND	0.0024		mg/Kg-dry	1	11/30/2012
Aldrin	ND	0.0024		mg/Kg-dry	1	11/30/2012
alpha-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
alpha-Chlordane	ND	0.0024		mg/Kg-dry	1	11/30/2012
beta-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
Chlordane	ND	0.024		mg/Kg-dry	1	11/30/2012
delta-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
Dieldrin	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endosulfan I	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endosulfan II	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endosulfan sulfate	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endrin	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endrin aldehyde	ND	0.0024		mg/Kg-dry	1	11/30/2012
Endrin ketone	ND	0.0024		mg/Kg-dry	1	11/30/2012
gamma-BHC	ND	0.0024		mg/Kg-dry	1	11/30/2012
gamma-Chlordane	ND	0.0024		mg/Kg-dry	1	11/30/2012
Heptachlor	ND	0.0024		mg/Kg-dry	1	11/30/2012
Heptachlor epoxide	ND	0.0024		mg/Kg-dry	1	11/30/2012
Methoxychlor	ND	0.0024		mg/Kg-dry	1	11/30/2012
Toxaphene	ND	0.049		mg/Kg-dry	1	11/30/2012
<b>TCLP Mercury</b>			<b>SW1311/7470A</b>		Prep Date: 11/30/2012	Analyst: LB
Mercury	ND	0.0002		mg/L	1	12/3/2012
<b>Mercury</b>			<b>SW7471A</b>		Prep Date: 12/3/2012	Analyst: LB
Mercury	1.6	0.26		mg/Kg-dry	10	12/4/2012
<b>Metals by ICP/MS</b>			<b>SW6020 (SW3050B)</b>		Prep Date: 11/30/2012	Analyst: JG
Arsenic	10	1.5		mg/Kg-dry	10	12/4/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

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B - Analyte detected in the associated Method Blank

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E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB14-(24-32)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 10:55:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-020		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Metals by ICP/MS</b>						
			<b>SW6020 (SW3050B)</b>		Prep Date: 11/30/2012	Analyst: JG
Barium	360	1.5		mg/Kg-dry	10	12/4/2012
Cadmium	25	0.77		mg/Kg-dry	10	12/4/2012
Chromium	50	1.5		mg/Kg-dry	10	12/4/2012
Copper	4500	39		mg/Kg-dry	100	12/4/2012
Lead	9700	7.7		mg/Kg-dry	100	12/4/2012
Manganese	610	1.5		mg/Kg-dry	10	12/4/2012
Selenium	ND	1.5		mg/Kg-dry	10	12/4/2012
Silver	2.9	1.5		mg/Kg-dry	10	12/4/2012
Zinc	12000	77		mg/Kg-dry	100	12/4/2012
<b>TCLP Metals by ICP/MS</b>						
			<b>SW1311/6020 (SW3005A)</b>		Prep Date: 11/29/2012	Analyst: JG
Arsenic	ND	0.01		mg/L	5	11/29/2012
Barium	0.85	0.5		mg/L	5	11/29/2012
Cadmium	0.35	0.005		mg/L	5	11/29/2012
Chromium	ND	0.01		mg/L	5	11/29/2012
Copper	2.3	0.1		mg/L	5	11/29/2012
Lead	16	0.005		mg/L	5	11/29/2012
Manganese	3.3	0.01		mg/L	5	11/29/2012
Selenium	ND	0.01		mg/L	5	11/29/2012
Silver	ND	0.01		mg/L	5	11/29/2012
Zinc	92	1		mg/L	100	11/30/2012
<b>Semivolatile Organic Compounds by GC/MS</b>						
			<b>SW8270C (SW3550B)</b>		Prep Date: 11/29/2012	Analyst: DM
Acenaphthene	7.7	0.49		mg/Kg-dry	1	11/29/2012
Acenaphthylene	3.4	0.49		mg/Kg-dry	1	11/29/2012
Aniline	ND	4.9		mg/Kg-dry	1	11/29/2012
Anthracene	30	0.49		mg/Kg-dry	1	11/29/2012
Benz(a)anthracene	64	2.4		mg/Kg-dry	5	11/30/2012
Benzidine	ND	4.9		mg/Kg-dry	1	11/29/2012
Benzo(a)pyrene	56	0.49		mg/Kg-dry	1	11/29/2012
Benzo(b)fluoranthene	49	0.49		mg/Kg-dry	1	11/29/2012
Benzo(g,h,i)perylene	33	0.49		mg/Kg-dry	1	11/29/2012
Benzo(k)fluoranthene	43	0.49		mg/Kg-dry	1	11/29/2012
Benzoic acid	ND	12		mg/Kg-dry	1	11/29/2012
Benzyl alcohol	ND	2.5		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethoxy)methane	ND	2.5		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg-dry	1	11/29/2012
Bis(2-ethylhexyl)phthalate	ND	12		mg/Kg-dry	1	11/29/2012
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg-dry	1	11/29/2012

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R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-020

**Client Sample ID:** LM-SB14-(24-32)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
Butyl benzyl phthalate	ND	2.5		mg/Kg-dry	1	11/29/2012
Carbazole	9.8	2.5		mg/Kg-dry	1	11/29/2012
4-Chloroaniline	ND	2.5		mg/Kg-dry	1	11/29/2012
4-Chloro-3-methylphenol	ND	4.9		mg/Kg-dry	1	11/29/2012
2-Chloronaphthalene	ND	2.5		mg/Kg-dry	1	11/29/2012
2-Chlorophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
4-Chlorophenyl phenyl ether	ND	2.5		mg/Kg-dry	1	11/29/2012
Chrysene	66	2.4		mg/Kg-dry	5	11/30/2012
Dibenz(a,h)anthracene	17	0.49		mg/Kg-dry	1	11/29/2012
Dibenzofuran	5.3	2.5		mg/Kg-dry	1	11/29/2012
1,2-Dichlorobenzene	ND	2.5		mg/Kg-dry	1	11/29/2012
1,3-Dichlorobenzene	ND	2.5		mg/Kg-dry	1	11/29/2012
1,4-Dichlorobenzene	ND	2.5		mg/Kg-dry	1	11/29/2012
3,3'-Dichlorobenzidine	ND	2.5		mg/Kg-dry	1	11/29/2012
2,4-Dichlorophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
Diethyl phthalate	ND	2.5		mg/Kg-dry	1	11/29/2012
2,4-Dimethylphenol	ND	2.5		mg/Kg-dry	1	11/29/2012
Dimethyl phthalate	ND	2.5		mg/Kg-dry	1	11/29/2012
4,6-Dinitro-2-methylphenol	ND	4.9		mg/Kg-dry	1	11/29/2012
2,4-Dinitrophenol	ND	12		mg/Kg-dry	1	11/29/2012
2,4-Dinitrotoluene	ND	0.49		mg/Kg-dry	1	11/29/2012
2,6-Dinitrotoluene	ND	0.49		mg/Kg-dry	1	11/29/2012
Di-n-butyl phthalate	ND	2.5		mg/Kg-dry	1	11/29/2012
Di-n-octyl phthalate	ND	2.5		mg/Kg-dry	1	11/29/2012
Fluoranthene	130	2.4		mg/Kg-dry	5	11/30/2012
Fluorene	11	0.49		mg/Kg-dry	1	11/29/2012
Hexachlorobenzene	ND	2.5		mg/Kg-dry	1	11/29/2012
Hexachlorobutadiene	ND	2.5		mg/Kg-dry	1	11/29/2012
Hexachlorocyclopentadiene	ND	2.5		mg/Kg-dry	1	11/29/2012
Hexachloroethane	ND	2.5		mg/Kg-dry	1	11/29/2012
Indeno(1,2,3-cd)pyrene	30	0.49		mg/Kg-dry	1	11/29/2012
Isophorone	ND	2.5		mg/Kg-dry	1	11/29/2012
2-Methylnaphthalene	3.8	2.5		mg/Kg-dry	1	11/29/2012
2-Methylphenol	ND	2.5		mg/Kg-dry	1	11/29/2012
4-Methylphenol	ND	2.5		mg/Kg-dry	1	11/29/2012
Naphthalene	4.2	0.49		mg/Kg-dry	1	11/29/2012
2-Nitroaniline	ND	2.5		mg/Kg-dry	1	11/29/2012
3-Nitroaniline	ND	2.5		mg/Kg-dry	1	11/29/2012

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E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-020

**Client Sample ID:** LM-SB14-(24-32)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>				Prep Date: 11/29/2012	Analyst: DM
4-Nitroaniline	ND	2.5		mg/Kg-dry	1	11/29/2012
2-Nitrophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
4-Nitrophenol	ND	4.9		mg/Kg-dry	1	11/29/2012
Nitrobenzene	ND	0.49		mg/Kg-dry	1	11/29/2012
N-Nitrosodi-n-propylamine	ND	0.49		mg/Kg-dry	1	11/29/2012
N-Nitrosodimethylamine	ND	2.5		mg/Kg-dry	1	11/29/2012
N-Nitrosodiphenylamine	ND	0.49		mg/Kg-dry	1	11/29/2012
2, 2'-oxybis(1-Chloropropane)	ND	2.5		mg/Kg-dry	1	11/29/2012
Pentachlorophenol	ND	0.49		mg/Kg-dry	1	11/29/2012
Phanthrene	120	2.4		mg/Kg-dry	5	11/30/2012
Phenol	ND	2.5		mg/Kg-dry	1	11/29/2012
Pyrene	120	2.4		mg/Kg-dry	5	11/30/2012
Pyridine	ND	9.9		mg/Kg-dry	1	11/29/2012
1,2,4-Trichlorobenzene	ND	2.5		mg/Kg-dry	1	11/29/2012
2,4,5-Trichlorophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
2,4,6-Trichlorophenol	ND	2.5		mg/Kg-dry	1	11/29/2012
<b>Volatile Organic Compounds by GC/MS</b>						
	<b>SW5035/8260B</b>				Prep Date: 11/27/2012	Analyst: ERP
Acetone	ND	0.17		mg/Kg-dry	1	12/3/2012
Benzene	ND	0.012		mg/Kg-dry	1	12/3/2012
Bromodichloromethane	ND	0.012		mg/Kg-dry	1	12/3/2012
Bromoform	ND	0.012		mg/Kg-dry	1	12/3/2012
Bromomethane	ND	0.023		mg/Kg-dry	1	12/3/2012
2-Butanone	ND	0.17		mg/Kg-dry	1	12/3/2012
Carbon disulfide	ND	0.12		mg/Kg-dry	1	12/3/2012
Carbon tetrachloride	ND	0.012		mg/Kg-dry	1	12/3/2012
Chlorobenzene	ND	0.012		mg/Kg-dry	1	12/3/2012
Chloroethane	ND	0.023		mg/Kg-dry	1	12/3/2012
Chloroform	ND	0.012		mg/Kg-dry	1	12/3/2012
Chloromethane	ND	0.023		mg/Kg-dry	1	12/3/2012
Dibromochloromethane	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
1,2-Dichloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
1,2-Dichloropropane	ND	0.012		mg/Kg-dry	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0046		mg/Kg-dry	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0046		mg/Kg-dry	1	12/3/2012

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**STAT Analysis Corporation**

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-020

**Client Sample ID:** LM-SB14-(24-32)-112712  
**Collection Date:** 11/27/2012 10:55:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Ethylbenzene	ND	0.012		mg/Kg-dry	1	12/3/2012
2-Hexanone	ND	0.046		mg/Kg-dry	1	12/3/2012
4-Methyl-2-pentanone	ND	0.046		mg/Kg-dry	1	12/3/2012
Methylene chloride	ND	0.023		mg/Kg-dry	1	12/3/2012
Methyl tert-butyl ether	ND	0.012		mg/Kg-dry	1	12/3/2012
Styrene	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
Tetrachloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
Toluene	ND	0.012		mg/Kg-dry	1	12/3/2012
1,1,1-Trichloroethane	0.022	0.012		mg/Kg-dry	1	12/3/2012
1,1,2-Trichloroethane	ND	0.012		mg/Kg-dry	1	12/3/2012
Trichloroethene	ND	0.012		mg/Kg-dry	1	12/3/2012
Vinyl chloride	ND	0.012		mg/Kg-dry	1	12/3/2012
Xylenes, Total	ND	0.035		mg/Kg-dry	1	12/3/2012
<b>pH (25 °C)</b>						
pH	SW9045C			Prep Date: 11/30/2012	Analyst: MNG	
	8.4			pH Units	1	11/30/2012
<b>Percent Moisture</b>						
Percent Moisture	D2974		*	Prep Date: 11/28/2012	Analyst: RW	
	33.5	0.2		wt%	1	11/29/2012

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB16-(24-36)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 10:40:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-021		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>PCBs</b>						
Aroclor 1016	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1221	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1232	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1242	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1248	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1254	ND	0.092		mg/Kg-dry	1	11/30/2012
Aroclor 1260	ND	0.092		mg/Kg-dry	1	11/30/2012
<b>Pesticides</b>						
4,4'-DDD	ND	0.0018		mg/Kg-dry	1	11/30/2012
4,4'-DDE	ND	0.0018		mg/Kg-dry	1	11/30/2012
4,4'-DDT	ND	0.0018		mg/Kg-dry	1	11/30/2012
Aldrin	ND	0.0018		mg/Kg-dry	1	11/30/2012
alpha-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
alpha-Chlordane	ND	0.0018		mg/Kg-dry	1	11/30/2012
beta-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
Chlordane	ND	0.018		mg/Kg-dry	1	11/30/2012
delta-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
Dieldrin	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endosulfan I	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endosulfan II	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endosulfan sulfate	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endrin	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endrin aldehyde	ND	0.0018		mg/Kg-dry	1	11/30/2012
Endrin ketone	ND	0.0018		mg/Kg-dry	1	11/30/2012
gamma-BHC	ND	0.0018		mg/Kg-dry	1	11/30/2012
gamma-Chlordane	ND	0.0018		mg/Kg-dry	1	11/30/2012
Heptachlor	ND	0.0018		mg/Kg-dry	1	11/30/2012
Heptachlor epoxide	ND	0.0018		mg/Kg-dry	1	11/30/2012
Methoxychlor	ND	0.0018		mg/Kg-dry	1	11/30/2012
Toxaphene	ND	0.038		mg/Kg-dry	1	11/30/2012
<b>TCLP Mercury</b>						
Mercury	SW1311/7470A			Prep Date: 11/30/2012	Analyst: LB	
	ND	0.0002		mg/L	1	12/3/2012
<b>Mercury</b>						
Mercury	SW7471A			Prep Date: 12/3/2012	Analyst: LB	
	7.8	1.8		mg/Kg-dry	100	12/4/2012
<b>Metals by ICP/MS</b>						
Arsenic	SW6020 (SW3050B)			Prep Date: 11/30/2012	Analyst: JG	
	15	1		mg/Kg-dry	10	11/30/2012

ND - Not Detected at the Reporting Limit

Qualifiers: J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

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12/11/12

**STAT Analysis Corporation**

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: December 10, 2012

Date Printed: December 10, 2012

Client: Weston Solutions  
 Lab Order: 12110922  
 Project: Lowenthal Metals Chicago, IL  
 Lab ID: 12110922-021

Client Sample ID: LM-SB16-(24-36)-112712  
 Collection Date: 11/27/2012 10:40:00 AM  
 Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Metals by ICP/MS</b>						
			<b>SW6020 (SW3050B)</b>		Prep Date: 11/30/2012	Analyst: JG
Barium	230	1		mg/Kg-dry	10	11/30/2012
Cadmium	25	0.52		mg/Kg-dry	10	11/30/2012
Chromium	14	1		mg/Kg-dry	10	11/30/2012
Copper	2100	130		mg/Kg-dry	500	12/3/2012
Lead	7400	26		mg/Kg-dry	500	12/3/2012
Manganese	190	1		mg/Kg-dry	10	11/30/2012
Selenium	1.7	1		mg/Kg-dry	10	11/30/2012
Silver	1.7	1		mg/Kg-dry	10	11/30/2012
Zinc	14000	260		mg/Kg-dry	500	12/3/2012
<b>TCLP Metals by ICP/MS</b>						
			<b>SW1311/6020 (SW3005A)</b>		Prep Date: 11/29/2012	Analyst: JG
Arsenic	ND	0.01		mg/L	5	11/29/2012
Barium	ND	0.5		mg/L	5	11/29/2012
Cadmium	0.74	0.005		mg/L	5	11/29/2012
Chromium	ND	0.01		mg/L	5	11/29/2012
Copper	19	2		mg/L	100	11/30/2012
Lead	76	1		mg/L	1000	11/30/2012
Manganese	1.8	0.01		mg/L	5	11/29/2012
Selenium	ND	0.01		mg/L	5	11/29/2012
Silver	ND	0.01		mg/L	5	11/29/2012
Zinc	510	10		mg/L	1000	11/30/2012
<b>Semivolatile Organic Compounds by GC/MS</b>						
			<b>SW8270C (SW3550B)</b>		Prep Date: 11/29/2012	Analyst: DM
Acenaphthene	2.4	0.038		mg/Kg-dry	1	11/29/2012
Acenaphthylene	0.87	0.038		mg/Kg-dry	1	11/29/2012
Aniline	ND	0.38		mg/Kg-dry	1	11/29/2012
Anthracene	5.3	0.19		mg/Kg-dry	5	11/30/2012
Benz(a)anthracene	13	0.19		mg/Kg-dry	5	11/30/2012
Benzidine	ND	0.38		mg/Kg-dry	1	11/29/2012
Benzo(a)pyrene	12	0.19		mg/Kg-dry	5	11/30/2012
Benzo(b)fluoranthene	11	0.19		mg/Kg-dry	5	11/30/2012
Benzo(g,h,i)perylene	6.5	0.19		mg/Kg-dry	5	11/30/2012
Benzo(k)fluoranthene	9.1	0.19		mg/Kg-dry	5	11/30/2012
Benzoic acid	ND	0.95		mg/Kg-dry	1	11/29/2012
Benzyl alcohol	ND	0.19		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethoxy)methane	ND	0.19		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethyl)ether	ND	0.19		mg/Kg-dry	1	11/29/2012
Bis(2-ethylhexyl)phthalate	ND	0.95		mg/Kg-dry	1	11/29/2012
4-Bromophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	11/29/2012

ND - Not Detected at the Reporting Limit

Qualifiers: J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

4/11/12  
12/11/12

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-021

**Client Sample ID:** LM-SB16-(24-36)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
		<b>SW8270C (SW3550B)</b>			<b>Prep Date: 11/29/2012</b>	<b>Analyst: DM</b>
Butyl benzyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
Carbazole	2.8	0.19		mg/Kg-dry	1	11/29/2012
4-Chloroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Chloro-3-methylphenol	ND	0.38		mg/Kg-dry	1	11/29/2012
2-Chloronaphthalene	ND	0.19		mg/Kg-dry	1	11/29/2012
2-Chlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Chlorophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	11/29/2012
Chrysene	14	0.19		mg/Kg-dry	5	11/30/2012
Dibenz(a,h)anthracene	3.5	0.038		mg/Kg-dry	1	11/29/2012
Dibenzofuran	1.4	0.19		mg/Kg-dry	1	11/29/2012
1,2-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
1,3-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
1,4-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
3,3'-Dichlorobenzidine	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4-Dichlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Diethyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4-Dimethylphenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Dimethyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
4,6-Dinitro-2-methylphenol	ND	0.38		mg/Kg-dry	1	11/29/2012
2,4-Dinitrophenol	ND	0.95		mg/Kg-dry	1	11/29/2012
2,4-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	11/29/2012
2,6-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	11/29/2012
Di-n-butyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
Di-n-octyl phthalate	ND	0.19		mg/Kg-dry	1	11/29/2012
Fluoranthene	13	0.19		mg/Kg-dry	5	12/3/2012
Fluorene	2.5	0.038		mg/Kg-dry	1	11/29/2012
Hexachlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
Hexachlorobutadiene	ND	0.19		mg/Kg-dry	1	11/29/2012
Hexachlorocyclopentadiene	ND	0.19		mg/Kg-dry	1	11/29/2012
Hexachloroethane	ND	0.19		mg/Kg-dry	1	11/29/2012
Indeno(1,2,3-cd)pyrene	5.8	0.19		mg/Kg-dry	5	11/30/2012
Isophorone	ND	0.19		mg/Kg-dry	1	11/29/2012
2-Methylnaphthalene	0.89	0.19		mg/Kg-dry	1	11/29/2012
2-Methylphenol	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Methylphenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Naphthalene	1.9	0.038		mg/Kg-dry	1	11/29/2012
2-Nitroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012
3-Nitroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012

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RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

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R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB16-(24-36)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 10:40:00 AM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-021		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>			Prep Date: 11/29/2012	Analyst: DM	
4-Nitroaniline	ND	0.19		mg/Kg-dry	1	11/29/2012
2-Nitrophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
4-Nitrophenol	ND	0.38		mg/Kg-dry	1	11/29/2012
Nitrobenzene	ND	0.038		mg/Kg-dry	1	11/29/2012
N-Nitrosodi-n-propylamine	ND	0.038		mg/Kg-dry	1	11/29/2012
N-Nitrosodimethylamine	ND	0.19		mg/Kg-dry	1	11/29/2012
N-Nitrosodiphenylamine	ND	0.038		mg/Kg-dry	1	11/29/2012
2, 2'-oxybis(1-Chloropropane)	ND	0.19		mg/Kg-dry	1	11/29/2012
Pentachlorophenol	ND	0.038		mg/Kg-dry	1	11/29/2012
Phenanthrene	22	0.19		mg/Kg-dry	5	11/30/2012
Phenol	ND	0.19		mg/Kg-dry	1	11/29/2012
Pyrene	22	0.19		mg/Kg-dry	5	11/30/2012
Pyridine	ND	0.76		mg/Kg-dry	1	11/29/2012
1,2,4-Trichlorobenzene	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4,5-Trichlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
2,4,6-Trichlorophenol	ND	0.19		mg/Kg-dry	1	11/29/2012
<b>Volatile Organic Compounds by GC/MS</b>						
	<b>SW5035/8260B</b>			Prep Date: 11/27/2012	Analyst: ERP	
Acetone	ND	0.086		mg/Kg-dry	1	12/3/2012
Benzene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Bromodichloromethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
Bromoform	ND	0.0057		mg/Kg-dry	1	12/3/2012
Bromomethane	ND	0.011		mg/Kg-dry	1	12/3/2012
2-Butanone	ND	0.086		mg/Kg-dry	1	12/3/2012
Carbon disulfide	ND	0.057		mg/Kg-dry	1	12/3/2012
Carbon tetrachloride	ND	0.0057		mg/Kg-dry	1	12/3/2012
Chlorobenzene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Chloroethane	ND	0.011		mg/Kg-dry	1	12/3/2012
Chloroform	ND	0.0057		mg/Kg-dry	1	12/3/2012
Chloromethane	ND	0.011		mg/Kg-dry	1	12/3/2012
Dibromochloromethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,2-Dichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,2-Dichloropropane	ND	0.0057		mg/Kg-dry	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0023		mg/Kg-dry	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0023		mg/Kg-dry	1	12/3/2012

ND - Not Detected at the Reporting Limit

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-021

**Client Sample ID:** LM-SB16-(24-36)-112712  
**Collection Date:** 11/27/2012 10:40:00 AM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Ethylbenzene	ND	0.0057		mg/Kg-dry	1	12/3/2012
2-Hexanone	ND	0.023		mg/Kg-dry	1	12/3/2012
4-Methyl-2-pentanone	ND	0.023		mg/Kg-dry	1	12/3/2012
Methylene chloride	ND	0.011		mg/Kg-dry	1	12/3/2012
Methyl tert-butyl ether	ND	0.0057		mg/Kg-dry	1	12/3/2012
Styrene	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
Tetrachloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Toluene	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1,1-Trichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
1,1,2-Trichloroethane	ND	0.0057		mg/Kg-dry	1	12/3/2012
Trichloroethene	ND	0.0057		mg/Kg-dry	1	12/3/2012
Vinyl chloride	ND	0.0057		mg/Kg-dry	1	12/3/2012
Xylenes, Total	ND	0.017		mg/Kg-dry	1	12/3/2012
<b>pH (25 °C)</b>						
pH			<b>SW9045C</b>			Prep Date: 11/30/2012 Analyst: MNG
	7.9			pH Units	1	11/30/2012
<b>Percent Moisture</b>						
Percent Moisture			<b>D2974</b>			Prep Date: 11/28/2012 Analyst: RW
	13.0	0.2	*	wt%	1	11/29/2012

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB05-(6-16)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 2:25:00 PM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-022		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>PCBs</b>	<b>SW8082 (SW3550B)</b>					
Aroclor 1016	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1221	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1232	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1242	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1248	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1254	ND	0.093		mg/Kg-dry	1	11/30/2012
Aroclor 1260	ND	0.093		mg/Kg-dry	1	11/30/2012
<b>Pesticides</b>	<b>SW8081 (SW3550B)</b>					
4,4'-DDD	ND	0.0019		mg/Kg-dry	1	11/30/2012
4,4'-DDE	ND	0.0019		mg/Kg-dry	1	11/30/2012
4,4'-DDT	ND	0.0019		mg/Kg-dry	1	11/30/2012
Aldrin	ND	0.0019		mg/Kg-dry	1	11/30/2012
alpha-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
alpha-Chlordane	ND	0.0019		mg/Kg-dry	1	11/30/2012
beta-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
Chlordane	ND	0.019		mg/Kg-dry	1	11/30/2012
delta-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
Dieldrin	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endosulfan I	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endosulfan II	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endosulfan sulfate	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endrin	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endrin aldehyde	ND	0.0019		mg/Kg-dry	1	11/30/2012
Endrin ketone	ND	0.0019		mg/Kg-dry	1	11/30/2012
gamma-BHC	ND	0.0019		mg/Kg-dry	1	11/30/2012
gamma-Chlordane	ND	0.0019		mg/Kg-dry	1	11/30/2012
Heptachlor	ND	0.0019		mg/Kg-dry	1	11/30/2012
Heptachlor epoxide	ND	0.0019		mg/Kg-dry	1	11/30/2012
Methoxychlor	ND	0.0019		mg/Kg-dry	1	11/30/2012
Toxaphene	ND	0.038		mg/Kg-dry	1	11/30/2012
<b>TCLP Mercury</b>	<b>SW1311/7470A</b>					
Mercury	ND	0.0002		mg/L	1	12/3/2012
<b>Mercury</b>	<b>SW7471A</b>					
Mercury	0.24	0.02		mg/Kg-dry	1	12/4/2012
<b>Metals by ICP/MS</b>	<b>SW6020 (SW3050B)</b>					
Arsenic	6.2	1		mg/Kg-dry	10	12/4/2012

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**STAT Analysis Corporation**
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*Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-*
**Date Reported:** December 10, 2012

**Date Printed:** December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-022

**Client Sample ID:** LM-SB05-(6-16)-112712  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Metals by ICP/MS</b>						
			<b>SW6020 (SW3050B)</b>		Prep Date: 11/30/2012	Analyst: JG
Barium	110	1		mg/Kg-dry	10	12/4/2012
Cadmium	7	0.52		mg/Kg-dry	10	12/4/2012
Chromium	8	1		mg/Kg-dry	10	12/4/2012
Copper	12000	130		mg/Kg-dry	500	12/4/2012
Lead	1100	0.52		mg/Kg-dry	10	12/4/2012
Manganese	150	1		mg/Kg-dry	10	12/4/2012
Selenium	1.3	1		mg/Kg-dry	10	12/4/2012
Silver	2.3	1		mg/Kg-dry	10	12/4/2012
Zinc	19000	260		mg/Kg-dry	500	12/4/2012
<b>TCLP Metals by ICP/MS</b>						
			<b>SW1311/6020 (SW3005A)</b>		Prep Date: 11/29/2012	Analyst: JG
Arsenic	0.011	0.01		mg/L	5	11/29/2012
Barium	ND	0.5		mg/L	5	11/29/2012
Cadmium	0.12	0.005		mg/L	5	11/29/2012
Chromium	ND	0.01		mg/L	5	11/29/2012
Copper	4	2		mg/L	100	11/30/2012
Lead	2.2	0.1		mg/L	100	11/30/2012
Manganese	1.2	0.01		mg/L	5	11/29/2012
Selenium	ND	0.01		mg/L	5	11/29/2012
Silver	ND	0.01		mg/L	5	11/29/2012
Zinc	120	1		mg/L	100	11/30/2012
<b>Semivolatile Organic Compounds by GC/MS</b>						
			<b>SW8270C (SW3550B)</b>		Prep Date: 11/29/2012	Analyst: DM
Acenaphthene	ND	0.38		mg/Kg-dry	1	11/29/2012
Acenaphthylene	0.97	0.38		mg/Kg-dry	1	11/29/2012
Aniline	ND	3.8		mg/Kg-dry	1	11/29/2012
Anthracene	3.9	0.38		mg/Kg-dry	1	11/29/2012
Benz(a)anthracene	5.4	0.38		mg/Kg-dry	1	11/29/2012
Benzidine	ND	3.8		mg/Kg-dry	1	11/29/2012
Benzo(a)pyrene	20	0.38		mg/Kg-dry	1	11/29/2012
Benzo(b)fluoranthene	6.2	0.38		mg/Kg-dry	1	11/29/2012
Benzo(g,h,i)perylene	8.6	0.38		mg/Kg-dry	1	11/29/2012
Benzo(k)fluoranthene	4.1	0.38		mg/Kg-dry	1	11/29/2012
Benzoic acid	ND	9.5		mg/Kg-dry	1	11/29/2012
Benzyl alcohol	ND	1.9		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethoxy)methane	ND	1.9		mg/Kg-dry	1	11/29/2012
Bis(2-chloroethyl)ether	ND	1.9		mg/Kg-dry	1	11/29/2012
Bis(2-ethylhexyl)phthalate	ND	9.5		mg/Kg-dry	1	11/29/2012
4-Bromophenyl phenyl ether	ND	1.9		mg/Kg-dry	1	11/29/2012

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RL - Reporting / Quantitation Limit for the analysis

**Qualifiers:** J - Analyte detected below quantitation limits

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

<b>Client:</b>	Weston Solutions	<b>Client Sample ID:</b>	LM-SB05-(6-16)-112712
<b>Lab Order:</b>	12110922	<b>Collection Date:</b>	11/27/2012 2:25:00 PM
<b>Project:</b>	Lowenthal Metals Chicago, IL	<b>Matrix:</b>	Soil
<b>Lab ID:</b>	12110922-022		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>					
Butyl benzyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
Carbazole	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Chloroaniline	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Chloro-3-methylphenol	ND	3.8	mg/Kg-dry	1		11/29/2012
2-Chloronaphthalene	ND	1.9	mg/Kg-dry	1		11/29/2012
2-Chlorophenol	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Chlorophenyl phenyl ether	ND	1.9	mg/Kg-dry	1		11/29/2012
Chrysene	14	0.38	mg/Kg-dry	1		11/29/2012
Dibenz(a,h)anthracene	2.8	0.38	mg/Kg-dry	1		11/29/2012
Dibenzofuran	ND	1.9	mg/Kg-dry	1		11/29/2012
1,2-Dichlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
1,3-Dichlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
1,4-Dichlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
3,3'-Dichlorobenzidine	ND	1.9	mg/Kg-dry	1		11/29/2012
2,4-Dichlorophenol	ND	1.9	mg/Kg-dry	1		11/29/2012
Diethyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
2,4-Dimethylphenol	ND	1.9	mg/Kg-dry	1		11/29/2012
Dimethyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
4,6-Dinitro-2-methylphenol	ND	3.8	mg/Kg-dry	1		11/29/2012
2,4-Dinitrophenol	ND	9.5	mg/Kg-dry	1		11/29/2012
2,4-Dinitrotoluene	ND	0.38	mg/Kg-dry	1		11/29/2012
2,6-Dinitrotoluene	ND	0.38	mg/Kg-dry	1		11/29/2012
Di-n-butyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
Di-n-octyl phthalate	ND	1.9	mg/Kg-dry	1		11/29/2012
Fluoranthene	7.5	0.38	mg/Kg-dry	1		11/29/2012
Fluorene	ND	0.38	mg/Kg-dry	1		11/29/2012
Hexachlorobenzene	ND	1.9	mg/Kg-dry	1		11/29/2012
Hexachlorobutadiene	ND	1.9	mg/Kg-dry	1		11/29/2012
Hexachlorocyclopentadiene	ND	1.9	mg/Kg-dry	1		11/29/2012
Hexachloroethane	ND	1.9	mg/Kg-dry	1		11/29/2012
Indeno(1,2,3-cd)pyrene	3.6	0.38	mg/Kg-dry	1		11/29/2012
Isophorone	ND	1.9	mg/Kg-dry	1		11/29/2012
2-Methylnaphthalene	ND	1.9	mg/Kg-dry	1		11/29/2012
2-Methylphenol	ND	1.9	mg/Kg-dry	1		11/29/2012
4-Methylphenol	ND	1.9	mg/Kg-dry	1		11/29/2012
Naphthalene	ND	0.38	mg/Kg-dry	1		11/29/2012
2-Nitroaniline	ND	1.9	mg/Kg-dry	1		11/29/2012
3-Nitroaniline	ND	1.9	mg/Kg-dry	1		11/29/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-022

**Client Sample ID:** LM-SB05-(6-16)-112712  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
	<b>SW8270C (SW3550B)</b>				Prep Date: 11/29/2012	Analyst: DM
4-Nitroaniline	ND	1.9		mg/Kg-dry	1	11/29/2012
2-Nitrophenol	ND	1.9		mg/Kg-dry	1	11/29/2012
4-Nitrophenol	ND	3.8		mg/Kg-dry	1	11/29/2012
Nitrobenzene	ND	0.38		mg/Kg-dry	1	11/29/2012
N-Nitrosodi-n-propylamine	ND	0.38		mg/Kg-dry	1	11/29/2012
N-Nitrosodimethylamine	ND	1.9		mg/Kg-dry	1	11/29/2012
N-Nitrosodiphenylamine	ND	0.38		mg/Kg-dry	1	11/29/2012
2, 2'-oxybis(1-Chloropropane)	ND	1.9		mg/Kg-dry	1	11/29/2012
Pentachlorophenol	ND	0.38		mg/Kg-dry	1	11/29/2012
Phenanthrene	5.8	0.38		mg/Kg-dry	1	11/29/2012
Phenol	ND	1.9		mg/Kg-dry	1	11/29/2012
Pyrene	49	1.9		mg/Kg-dry	5	11/30/2012
Pyridine	ND	7.7		mg/Kg-dry	1	11/29/2012
1,2,4-Trichlorobenzene	ND	1.9		mg/Kg-dry	1	11/29/2012
2,4,5-Trichlorophenol	ND	1.9		mg/Kg-dry	1	11/29/2012
2,4,6-Trichlorophenol	ND	1.9		mg/Kg-dry	1	11/29/2012
<b>Volatile Organic Compounds by GC/MS</b>						
	<b>SW5035/8260B</b>				Prep Date: 11/27/2012	Analyst: ERP
Acetone	ND	0.099		mg/Kg-dry	1	12/3/2012
Benzene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Bromodichloromethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
Bromoform	ND	0.0066		mg/Kg-dry	1	12/3/2012
Bromomethane	ND	0.013		mg/Kg-dry	1	12/3/2012
2-Butanone	ND	0.099		mg/Kg-dry	1	12/3/2012
Carbon disulfide	ND	0.066		mg/Kg-dry	1	12/3/2012
Carbon tetrachloride	ND	0.0066		mg/Kg-dry	1	12/3/2012
Chlorobenzene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Chloroethane	ND	0.013		mg/Kg-dry	1	12/3/2012
Chloroform	ND	0.0066		mg/Kg-dry	1	12/3/2012
Chloromethane	ND	0.013		mg/Kg-dry	1	12/3/2012
Dibromochloromethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,2-Dichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1-Dichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,2-Dichloropropane	ND	0.0066		mg/Kg-dry	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0026		mg/Kg-dry	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0026		mg/Kg-dry	1	12/3/2012

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

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H - Holding time exceeded

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Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-022

**Client Sample ID:** LM-SB05-(6-16)-112712  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Ethylbenzene	ND	0.0066		mg/Kg-dry	1	12/3/2012
2-Hexanone	ND	0.026		mg/Kg-dry	1	12/3/2012
4-Methyl-2-pentanone	ND	0.026		mg/Kg-dry	1	12/3/2012
Methylene chloride	ND	0.013		mg/Kg-dry	1	12/3/2012
Methyl tert-butyl ether	ND	0.0066		mg/Kg-dry	1	12/3/2012
Styrene	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
Tetrachloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Toluene	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1,1-Trichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
1,1,2-Trichloroethane	ND	0.0066		mg/Kg-dry	1	12/3/2012
Trichloroethene	ND	0.0066		mg/Kg-dry	1	12/3/2012
Vinyl chloride	ND	0.0066		mg/Kg-dry	1	12/3/2012
Xylenes, Total	ND	0.02		mg/Kg-dry	1	12/3/2012
pH (25 °C)	<b>SW5035/8260B</b>		Prep Date: 11/27/2012 Analyst: ERP			
pH	7.9			mg/Kg-dry	1	12/3/2012
Percent Moisture	<b>SW9045C</b>		Prep Date: 11/30/2012 Analyst: MNG			
Percent Moisture	14.3	0.2	*	pH Units	1	11/30/2012
<b>D2974</b>						
Percent Moisture				wt%	1	Prep Date: 11/28/2012 Analyst: RW
						11/29/2012

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Date Reported: December 10, 2012

Date Printed: December 10, 2012

**Client:** Weston Solutions  
**Lab Order:** 12110922  
**Project:** Lowenthal Metals Chicago, IL  
**Lab ID:** 12110922-023

**Client Sample ID:** LM-SB05-(6-16)-112712D  
**Collection Date:** 11/27/2012 2:25:00 PM  
**Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
		SW5035/8260B			Prep Date: 11/27/2012	Analyst: ERP
Acetone	0.098	0.077		mg/Kg	1	12/3/2012
Benzene	ND	0.0051		mg/Kg	1	12/3/2012
Bromodichloromethane	ND	0.0051		mg/Kg	1	12/3/2012
Bromoform	ND	0.0051		mg/Kg	1	12/3/2012
Bromomethane	ND	0.01		mg/Kg	1	12/3/2012
2-Butanone	ND	0.077		mg/Kg	1	12/3/2012
Carbon disulfide	ND	0.051		mg/Kg	1	12/3/2012
Carbon tetrachloride	ND	0.0051		mg/Kg	1	12/3/2012
Chlorobenzene	ND	0.0051		mg/Kg	1	12/3/2012
Chloroethane	ND	0.01		mg/Kg	1	12/3/2012
Chloroform	ND	0.0051		mg/Kg	1	12/3/2012
Chloromethane	ND	0.01		mg/Kg	1	12/3/2012
Dibromochloromethane	ND	0.0051		mg/Kg	1	12/3/2012
1,1-Dichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
1,2-Dichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
1,1-Dichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
cis-1,2-Dichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
trans-1,2-Dichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
1,2-Dichloropropane	ND	0.0051		mg/Kg	1	12/3/2012
cis-1,3-Dichloropropene	ND	0.0021		mg/Kg	1	12/3/2012
trans-1,3-Dichloropropene	ND	0.0021		mg/Kg	1	12/3/2012
Ethylbenzene	ND	0.0051		mg/Kg	1	12/3/2012
2-Hexanone	ND	0.021		mg/Kg	1	12/3/2012
4-Methyl-2-pentanone	ND	0.021		mg/Kg	1	12/3/2012
Methylene chloride	ND	0.01		mg/Kg	1	12/3/2012
Methyl tert-butyl ether	ND	0.0051		mg/Kg	1	12/3/2012
Styrene	ND	0.0051		mg/Kg	1	12/3/2012
1,1,2,2-Tetrachloroethane	ND	0.0051		mg/Kg	1	12/3/2012
Tetrachloroethene	ND	0.0051		mg/Kg	1	12/3/2012
Toluene	ND	0.0051		mg/Kg	1	12/3/2012
1,1,1-Trichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
1,1,2-Trichloroethane	ND	0.0051		mg/Kg	1	12/3/2012
Trichloroethene	ND	0.0051		mg/Kg	1	12/3/2012
Vinyl chloride	ND	0.0051		mg/Kg	1	12/3/2012
Xylenes, Total	ND	0.015		mg/Kg	1	12/3/2012

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E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**WHO'S WHO IN THE SFD FY13****SUPERFUND DIVISION****Conference Room Phone Lines**

Conference Room 511B	6-0778
Conference Room 512	6-0794
Conference Room 611A	6-0824
Conference Room 612B	3-8321
Conference Room 706	6-0864
Conference Room 708A	6-0886

**Immediate Office**

Karl, Richard C. ( <b>Division Director</b> )	3-9773	R0607	S-6J
Ballotti, Douglas ( <b>Deputy Division Director</b> )	6-4752	R0617	S-6J
Behrke, Kristina ( <b>Student Aide</b> )	3-1057	06009	S-6J
Louie, Bertanna ( <b>Student Aide</b> )	6-2838	06010	S-6J
Bumba, Lauren ( <b>Intern</b> )	6-4844	06008	S-6J
Dillard, Jacqueline D.	3-8730	06012	S-6J
McSevency, Megan	6-1972	06013	S-6J
Brauer, Jeanne ( <b>SEEP</b> )	3-1252	06200	S-6J
Joyce, Mary ( <b>SEEP</b> )	3-1252	06200	S-6J

**COMMUNITY AND LAND REVITALIZATION BRANCH****Immediate Office**

Dufficy, Joseph P. ( <b>Branch Chief</b> )	6-1960	R0704	SM-7J
Stephanie Harmon ( <b>APA</b> )	3-7948	07009	SM-7J
Bloom, Thomas R.	6-1967	07022	SM-7J
Choi, Christopher	3-5006	07027	SM-7J
Delumo, Jenny ( <b>Intern</b> )	3-3198	07040X	SM-7J
Grosshans, Jonathan	3-5617	07039	SM-7J
Martin, Marilou	3-9660	07016	SM-7J
Orr, Deborah L.	6-7576	07004	SM-7J
Potts, Danielle ( <b>Intern</b> )	3-2058	07036X	SM-7J
Van der Kloot, James K.	3-3161	07028	SM-7J

**Brownfields/NPL Reuse Section #1**

Gifford, Michael A. ( <b>Section Chief</b> )	6-7257	07024	SB-7J
Auker, Karla M.	440-250-1741	Ohio	
Baumann, Alan	6-3058	07021	SB-7J
Cragan, Keary E.	3-5669	07008	SB-7J
Cwik, Stephanie	6-0913	07031	SB-7J
Didier, Matthew	3-2112	07011	SB-7J
Morgan, Linda B.	6-4747	07007	SB-7J
Muller, Lori	440-250-1735	Ohio	
Pels, Jan F.	6-3009	07020	SB-7J
Peterson, Jon W.	3-1264	07038	SB-7J
Polston, Patricia J.	6-8093	07025	SB-7J
Spencer, Diane M.	6-5867	07019	SB-7J
Stimple, Bradley T.	440-250-1717	Ohio	
Johnson, Barbara ( <b>SEEP</b> )	6-5026	07017	SB-7J
Shang, Wei Wei ( <b>SEEP</b> )	6-4379	07013	SB-7J
Thomas, Mable ( <b>SEEP</b> )	6-4494	07014	SB-7J

**Brownfields/NPL Reuse Section #2**

Schafer, Gary M. ( <b>Section Chief</b> )	3-8827	07034	SB-7J
Coleman, Donna ( <b>APA</b> )	6-0396	07033	SB-7J
Bartman, Fred R.	6-0776	07024	SB-7J
Bradley, Brad W.	6-4742	07037	SB-7J
Clarke-Moreno, Rosita	6-7251	07032	SB-7J
Mangrum, Linda A.	3-2071	07023	SB-7J
Mankowski, Craig S.	6-9493	07036	SB-7J
Massenburg, Gwendolyn S.	6-0983	07045	SB-7J
Moore, Kelley A.	6-3598	07018	SB-7J
Neumann, Jane	3-0123	07012	SB-7J
Rogers, Kyle E.	6-1995	07029	SB-7J
Smith, Romona R.	6-6139	07015	SB-7J

**Community Involvement and Outreach Section**

Bouchee-Cureton, Yolanda ( <b>Section Chief</b> )	3-3209	07046	SI-7J
Allen, Cheryl	3-6196	07053	SI-7J
de Blasio, Don E.	6-4360	07042	SI-7J
DiCosmo, Nefertiti	6-6148	07052	SI-7J
Gallicchio, Pamela A.	6-0386	05075X	SM-5J
Jones, Teresa R.	6-0725	07040	SI-7J
Joyce, Emmett (Mike)	3-5546	07051	SI-7J
Krause, Patricia A.	6-9506	07042X	SI-7J
Leon, Heriberto	6-6163	07041	SI-7J

Narsete, Virginia A.

6-4359 07026X SI-7J

Novak, David S.

6-7478 07047 SI-7J

Pastor, Susan J.

3-1325 07044 SI-7J

Pope, Janet L.

3-0628 07054 SI-7J

Breeden, Mary (**SEEP**)

989-4015509 Remote

**ENFORCEMENT AND COMPLIANCE ASSURANCE BRANCH  
Immediate Office**Jaffess, Sharon (**Branch Chief**)

3-0536 R0515 SC-5J

Sanders, Jarrah (**Student Aide**)

6-6610 05112 SC-5J

Schmitt, Lawrence J.

3-6565 R0609 S-6J

**Chemical Emergency Preparedness and Prevention Section**Hans, Mick (**Section Chief**)

3-5050 05127 SC-5J

Filyayev, Anton (**Student Aide**)

3-8547 05121 SC-5J

Bezerra, Joana

6-6004 05118 SC-5J

Carr, Barbara A.

6-7187 05124 SC-5J

Cekus, Glenn A.

3-6449 05122 SC-5J

Chomycia, Greg E.

3-8217 05119 SC-5J

Chrzaszcz, Monika

6-0181 05115 SC-5J

Entzmünger, James A.

6-4062 05125 SC-5J

Jager, Ginger

6-0767 05116 SC-5J

Mayhugh, Robert J.

6-5929 05113 SC-5J

McNamara, Ruth Ann

3-3193 05126 SC-5J

Palomo, Silvia

3-2172 05114 SC-5J

Riley, Ellen

6-9497 05120 SC-5J

Ulfig, Joseph

3-8205 05122 SC-5J

Hess, Paul (**SEEP**)

6-6558 05093 SC-5J

Krebs, Karl (**SEEP**)

6-0850 05095 SC-5J

Maggos, Byron (**SEEP**)

3-8184 05108 SC-5J

Pua, Willy (**SEEP**)

6-6142 05094 SC-5J

Slawniak, Patricia M. (**SEEP**)

6-2840 05123 SC-5J

Solt, Joseph (**SEEP**)

3-4583 05109 SC-5J

Wicklein, Phillip (**SEEP**)

6-0185 05096 SC-5J

**Enforcement Services Section #1**Marks, Thomas C. (**Section Chief**)

3-6591 05062 SE-5J

Bensing, Milagros V.

3-2006 05055 SE-5J

Jansen, Sally J.

3-9046 05057 SE-5J

Kawecki, Joseph A.

6-7236 05067 SE-5J

Keating, Debra C.

3-7632 05056 SE-5J

Lilly, Arlene

3-1907 05046 SE-5J

McIntrye, Cheryl L.

6-1964 05064 SE-5J

Mullins, Valeric L.

3-5578 05069 SE-5J

Ropski, Carol A.

3-7647 05054 SE-5J

Ryczek, William J.

6-7184 05061 SE-5J

Woodfork, Ruth A.

3-6431 05049 SE-5J

Cheng, Akimi (**SEEP**)

6-6214 05058 SE-5J

Tang, Jack H. (**SEEP**)

3-8723 05053 SE-5J

**Enforcement Services Section #2**Bohlen, Carolyn (**Section Chief**)

6-6541 05132 SE-5J

Adams, Marsha A.

3-9484 05141 SE-5J

Co, Grace

3-6779 05135 SE-5J

Dababneh, Fouad N.

3-3944 05136 SE-5J

Herring, Margaret E.

6-6239 05140 SE-5J

Jones, Katrina D.

6-2871 05137 SE-5J

Rafati, Mohammed (Mike)

6-0390 05130 SE-5J

Ratliff, Denise D.

6-9481 05102 SE-5J

Sheppard, Deena M.

6-7048 05133 SE-5J

Vlcek, Lance L.

6-4783 05139 SE-5J

Young, Lillie T. (**SEEP**)

6-9484 05128 SE-5J

**Enforcement Services Section #3**Jones, Evette L. (**Section Chief**)

6-7572 R0716 SRC-7J

Gage, Fred

3-3167 07066 SRC-7J

Leftridge, Nita E.

3-4685 07056 SRC-7J

Lodge, Patricia A.

6-2343 07058X SRC-7J

Mays, Helen

6-6229 07065 SRC-7J

Vernon, Portrice L.

3-1063 07064 SRC-7J

Weimer, Noreen

3-8655 07055 SRC-7J

Chao, Mei-Chuan (**SEEP**)

6-0758 07097A SRC-7J

Liu, Mei-Ling (**SEEP**)

6-1478 07091 SRC-7J

Shih-Hoellwarth, Ann (**SEEP**)

6-1480 07092A SRC-7J

**Superfund Record Center**

Quesada, Todd <b>(Record Center Manager)</b>	6-4465	07097	SRC-7J
Bedford, Mark <b>(Contractor)</b>	6-6044	07098G	SRC-7J
Brown, Philip <b>(Contractor)</b>	3-9199	07095C	SRC-7J
Greska, Joyce <b>(Contractor)</b>	6-0894	7S2	SRC-7J
Hale, Carol <b>(Contractor)</b>	3-9510	07095F	SRC-7J
Kos, Lorraine <b>(Contractor)</b>	6-0911	07096	SRC-7J
Langford, Michael <b>(Contractor)</b>	6-0990	07098C	SRC-7J
Manzon, Ernesto <b>(Contractor)</b>	6-0212	07095A	SRC-7J
Santori, Jeffery <b>(Contractor)</b>	6-6227	07095D	SRC-7J
Thomas, Joshua <b>(Contractor)</b>	6-0195	07098D	SRC-7J
Williams, Kent <b>(Contractor)</b>	6-6777	7S1	SRC-7J

**EMERGENCY RESPONSE BRANCH #1****Immediate Office**

El-Zein, Jason <b>(Branch Chief)</b>	6-6039	R0513	SE-5J
	734-692-7661		Mich
Johnson, Tracy L. <b>(APA)</b>	734-692-7664		Mich
Jaster, Michelle L.	734-692-7683		Mich
Kush, Beverly J.	3-8200	05034	SE-5J

**Emergency Response Section #1**

Durno, Mark A. <b>(Section Chief)</b>	440-250-1743		Ohio
Augustyn, James E.	440-250-1742		Ohio
Dollhopf, Ralph H.	231-264-8713		Remote
Fredle, Joseph J.	440-250-1740		Ohio
Halbur, Kathryn	920-662-5424		Remote
Justice, James J.	440-250-1744		Ohio
Lam, Shelly	317-308-3073		Indiana
Renninger, Steven L.	513-569-7539		Ohio
Sewell, Jason	317-308-3377		Indiana
Turner, Kevin R.	618-997-0115		Remote
Vega, Sonia R.	651-757-2796		Minn
Wolfe, Stephen	440-250-1718		Ohio

**Emergency Response Section #2**

Clements, Mindy <b>(Section Chief)</b>	6-6439	05030	SE-5J
Adamo, Mary Jane <b>(APA)</b>	6-5905	05033	SE-5J
Calovich, Sheila M.	3-1505	05043	SE-5J
Edwards, Tricia	734-692-7687		Mich
Gulch, Jon J.	734-692-7686		Mich
Kelly, Brian	734-692-7684		Mich
Kimble, Jeffrey W.	734-692-7688		Mich
Lall, Partap C.	734-692-7685		Mich
Lee, Barbi J.	6-5296	05039	SE-5J
Lippert, Jeffrey	734-692-7682		Mich
Nightingale, Betsy	734-692-7665		Mich
Tzallas, Alexander C.	6-0622	05044	SE-5J
Whelan, Ann E.	6-7258	05042	SE-5J

**Field Services Section**

Padovani, Steven J. <b>(Section Chief)</b>	3-6755	05090	SFS-5J
Thornblad, Maria <b>(Student Aide)</b>	6-5496	05103	SFS-5J
Borseth, Jeffrey	734-692-7663		Mich
Canar, John R.	6-6182	05097	SFS-5J
Cooper, Brian S.	3-8651	05086	SFS-5J
Gebien, Alan A.	6-1304	05085	SFS-5J
Guerra, Beatriz J.	6-4753	05106	SFS-5J
Jablonowski, Eugene A.	6-4591	05088	SFS-5J
Lesniak, Keith J.	6-7189	05087	SFS-5J
Rhodes, Shunta	6-0670	05098	SFS-5J
Roth, Charles	6-0242	05104	SFS-5J
Ursic, James R.	3-1526	05100	SFS-5J
Maurice, Charles G. <b>(Liaison - ORD)</b>	6-6635	05083	SFS-5J
Cunningham, Kevin <b>(ORISE)</b>	6-7279	05099	SFS-5J
Jacobson, Linda M. <b>(ORISE)</b>	6-2433	05111	SFS-5J
Gist, Thomas <b>(SEEP)</b>	6-0393	05089	SFS-5J
Kung, Joseph <b>(SEEP)</b>	630-481-5000		Willow
Speer, Rob <b>(SEEP)</b>	734-692-7676		Mich
Wei, Ao-Chuiu <b>(SEEP)</b>	6-1450	05031	SE-5J

**EMERGENCY RESPONSE BRANCH #2****Immediate Office**

Borries, Samuel <b>(Branch Chief)</b>	3-8360	05022	SE-5J
Beck, Cynthia J. <b>(APA)</b>	6-6551	05018	SE-5J
<b>Emergency Response Section #3</b>			
Ribordy, Michael N. <b>(Section Chief)</b>	6-4592	05001	SE-5J
Phelps, Ann E. <b>(APA)</b>	3-2080	05002	SE-5J
Benning, Bradley	3-7613	05015	SE-5J
Brown, Jaime J.	6-2256	05003	SE-5J
Faryan, Steven J.	3-9351	05012	SE-5J
Maguire, Andrew	3-8782	05027	SE-5J
Mendoza, Ramon C.	6-4314	05026	SE-5J
Ruesch, Paul	6-7898	05024	SE-5J
Thomas, Craig A.	6-5907	05011	SE-5J
Zintak, Leonard N.	6-4246	05020	SE-5J

**Emergency Response Section #4**

Gebien, Charles <b>(Section Chief)</b>	3-7645	05006	SE-5J
Gray, Deidra A. <b>(APA)</b>	3-3240	05007	SE-5J
Atkociunas, Paul	6-7502	05014	SE-5J
Beslow, Michael	3-8678	05017	SE-5J
Boseman, Anita	6-6941	05028	SE-5J
Emmanouil, Stavros A.	6-1768	05016	SE-5J
Hassan, Jacob	6-6864	05023	SE-5J
Holz, Theresa	6-6845	05013	SE-5J
Maritote, John X.	3-9303	05032	SE-5J
Mitchell, James R.	3-9537	05004	SE-5J
Simon, Verneta J.	6-3601	05009	SE-5J

**Contracts Management Section**

Moore, M. Cecilia <b>(Section Chief)</b>	6-1488	05066	SA-5J
Triplett, LaShonda <b>(Student Aide)</b>	6-7717	05065	SA-5J
Chummar, Sam	6-1434	05040	SA-5J
Coleman-Fisher, Isalce	6-7597	05036	SA-5J
Dytrych, William J.	6-0755	05052	SA-5J
Hoory, Matthew	6-0254	05059	SA-5J
Norman, Carl D.	6-5495	05050	SA-5J
Parikh, Pankaj J.	6-6707	05071	SA-5J
Peterson, Steven R.	3-1422	05073	SA-5J
Pham, Howard	3-2310	05072	SA-5J
Quigley, Edward	6-7726	05060	SA-5J
Simpson, Cheryl R.	3-6284	05074	SA-5J
Stanuch, Gail C.	3-1056	05048	SA-5J
Vogtman, Patricia	6-9553	05051	SA-5J

**REMEDIAL RESPONSE BRANCH #1****Immediate Office**

Tanaka, Joan M. <b>(Branch Chief)</b>	3-5425	R0613	SR-6J
Muhtsun, Ruth <b>(Student Aide)</b>	6-6595	06055	SR-6J

**Remedial Response Section #1**

Vaidya, Ajit <b>(Acting Section Chief)</b>	3-5713	06066	SR-6J
Alcaro, Thomas S.	6-7278	06070	SR-6J
Chapman, James A.	6-7195	06068	SR-6J
Cheever, Jennifer	3-4627	06063	SR-6J
Evison, Leah H.	6-2064	06091	SR-6J
	651-757-2898		Minn
Fayoumi, Nabil S.	6-6840	06071	SR-6J
Fusinski, Keith	6-4445	06092	SR-6J
	734-692-7681		Mich
Kolak, Shari L.	6-6151	06064	SR-6J
Nguyen, Giang Van	6-6726	06073	SR-6J
Podowsky, Andrew A.	6-7573	06067	SR-6J
Schorle, Bernard J.	6-4746	06074	SR-6J
Goeks, Todd <b>(Liaison - NOAA)</b>	6-7527	06093	SR-6J
Karecki, Edward <b>(Liaison - USFWS)</b>	3-3202	06060	SR-6J

**Remedial Response Section #2**

Prendiville, Timothy <b>(Section Chief)</b>	6-5122	06034	SR-6]
Jeffries, Karen <b>(APA)</b>	3-9223	06033	SR-6]
Blake, Leslie	3-7921	06027	SR-6]
Cibulskis, Karen S.	6-1843	06040	SR-6]
Layne, Warren	6-7336	06023	SR-6]
Levin, Ida	6-6254	06020	SR-6]
Logan, Mary	6-4699	06015	SR-6]
McDonough, Mike	6-1550	06037	SR-6]
Novak, Dion J.	6-4737	06022	SR-6]
Ohl, Matthew J.	6-4442	06016	SR-6]
Roberman, Alida I.	6-7185	06028	SR-6]
Russell, Diane M.	989-401-5507		Remote
Thomas, Carlene	3-5655	06024	SR-6]

**Remedial Response Section #3**

Frey, Rebecca L. <b>(Section Chief)</b>	6-4760	06090	SR-6]
Berkoff, Michael	3-8983	06098	SR-6]
Gellier, Demaree	6-0214	06076	SR-6]
Desai, Sheila	3-4150	06083	SR-6]
Elder, Bonnie L.	6-4885	06096	SR-6]
Hahnberg, James J.	3-4213	06087	SR-6]
Hansen, Scott K.	6-1999	06079	SR-6]
Kern, Linda A.	6-7341	06075	SR-6]
Moynihan, Colleen	3-8196	06095	SR-6]
Saric, James A.	6-0992	06088	SR-6]
Valentin, Pablo	3-2886	06102	SR-6]

**Remedial Response Section #4**

Boone, Denise C. <b>(Section Chief)</b>	6-6217	06130	SR-6]
Aultz, Erica	3-7209	06122	SR-6]
Brauner, David M.	6-1526	06123	SR-6]
Dean, Frances M.	6-5046	06134	SR-6]
Hamblin, Patrick	6-6312	06118	SR-6]
Ivy, Glynis G.	6-1816	06138	SR-6]
Muniz, Nuria	6-4439	06117	SR-6]
Ross, Linda A.	3-6626	06135	SR-6]
Willis, Gloria	6-7259	06137	SR-6]
Wilson, David A.	6-1476	06136	SR-6]
Gahala, Amy <b>(IAG from USGS)</b>	6-6678	06140	SR-6]

**REMEDIAL RESPONSE BRANCH #2****Immediate Office**

Short, Thomas R. <b>(Branch Chief)</b>	3-8826	R0614	SR-6]
Burns, Maureen <b>(Student Aide)</b>	3-5550	06059	SR-6]

**Remedial Response Section #5**

Adler, Kevin R. <b>(Section Chief)</b>	6-7078	06050	SR-6]
Caine, Howard	3-9685	06053	SR-6]
del Rosario, Rosauro	6-6195	06058	SR-6]
Drexler, Timothy J.	3-4367	06052	SR-6]
Gielniewski, Margaret	6-6244	06057	SR-6]
Linnear, David D.	6-1841	06045	SR-6]
Nowotarski, Allison	3-0967	06047	SR-6]
Patterson, Leslie	6-4904	06044	SR-6]
Sullivan, Sheila A.	6-5251	06054	SR-6]
Tierney, Mary M.	6-4785	06048	SR-6]
Capacete, Cesar <b>(ORISE)</b>	6-7193	06056	SR-6]

**Remedial Response Section #6**

Bruce, Donald J. <b>(Section Chief)</b>	6-7241	06079	SR-6]
Thompson, Bennie J. <b>(APA)</b>	3-2052	06085	SR-6]
Beard, Gladys	6-7253	06105	SR-6]
Bianchin, Sheri L.	6-4745	06101	SR-6]
Fagiolo, John V.	6-0800	06100	SR-6]
Gore, Jeffrey B.	6-6552	06081	SR-6]
Hardin, Erik	6-2402	06084	SR-6]
Hill, Lolita A.	3-1621	06097	SR-6]
Kerr, Michelle	6-8961	06077	SR-6]
Linchbaugh, Stephanie	3-2315	06080	SR-6]
Martin, Linda B.	6-3854	06099	SR-6]
Molitor, Pamela J.	6-3543	06082	SR-6]
Sleboda-Braun, Jena	6-0272	06084	SR-6]

**Remedial Response Section #7**

Ostrodka, Stephen L. <b>(Section Chief)</b>	6-3011	06030	SR-6]
Steinfels, Daniel <b>(Student Aide)</b>	6-4061	06029	SR-6]
Barounis, Thomas	3-5577	06032	SR-6]
Chrstof, Michael	3-3705	06025	SR-6]
Fischer, Timothy J.	6-5787	06031	SR-6]
Gowda, Nanjunda	3-9236	06036	SR-6]
Mason-Smith, Karen L.	6-6150	06018	SR-6]
Quadri, Syed	6-5736	06038	SR-6]
Ryan, William J.	3-4374	06026	SR-6]
Seely, David P.	6-7058	06019	SR-6]
Smith, Thomas L.	6-6540	06017	SR-6]
Thompson, W. Owen	6-4843	06021	SR-6]

**Information and Technology Section**

Saunders, Vincent <b>(Section Chief)</b>	3-9077	06125	ST-6]
Batzek, James	3-8235	05110	ST-6]
Cano, Randolph O.	6-6036	06119	ST-6]
Collard, Darryl	3-9348	06131	ST-6]
Cubacub, Saray	3-1518	06124	ST-6]
Johnson, Nina <b>(Intern)</b>	6-2022	06107	ST-6]
Munoz, Edgardo	3-1076	06115	ST-6]
Rhodes, Earlene	3-1247	06139	ST-6]
Rittenhouse, James A.	6-1438	06136	ST-6]
Samuel, Janet R.	3-8069	06112	ST-6]
Street, Kerry	6-7240	06062	ST-6]
Walters, LaVetta C.	6-3505	06113	ST-6]
Zamastil, Doug E.	6-0650	06115	ST-6]
Zanter, Paul E.	6-7181	06116	ST-6]
Liu, Li-Ming <b>(SEEP)</b>	6-7178	06114	ST-6]

[Updated 1/10/13]